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THE REVENUE ACT OF 1918[1]

The Revenue act of 1918 which was signed by the President February 24, 1919, is the fourth great revenue measure of a notable series enacted during the present administration. The long delay in its passage has greatly handicapped the Treasury Department in the administration of collection and has been a cause of uncertainty and annoyance to business and taxpayers of all classes. In May, 1918, the President addressed the Congress urging that body to give prompt attention to this problem even at the cost of the customary summer vacation; on June 5, the Secretary of the Treasury advised Mr. Kitchin, chairman of the Ways and Means Committee, that the bill should provide for raising eight billion dollars, one third of the estimated expenses of the government for the coming year on a war basis; on September 3, the committee presented to the House of Representatives a bill estimated to raise this amount. In presenting his report Mr. Kitchin said: "In making the decision to recommend that one third of the expenditures for the current year be raised by taxes and two thirds from the sale of bonds, your Committee has been guided by conditions existing at the present time." The bill was passed by the House September 20, and the next day was referred by the Senate to the Committee on Finance.

The House increased existing tax rates, added new taxes and evinced some appreciation of the desirability of raising a substantial part of the government's requirements by taxation. But its hasty action and the radical revision of its bill by the Senate in connection with the Revenue act of 1917 led the public to expect similar results in connection with this measure so that it discounted the House bill and looked forward to the Senate's action.

While the measure was under consideration by the Senate Committee two important events occurred which necessitated changing plans. One was the passage of an act regulating the sale and manufacture of alcoholic beverages from July 1, 1919, until after

[1] Although approved February 24, 1919, and by customary practice entitled to be called the Revenue act of 1919, Section 1405 of the law itself reads "That this Act may be cited as the Revenue Act of 1918."

the demobilization of the army. This prohibition measure reduced the estimated yield from the tax on beverages by 500 million dollars. The other event was the signing of the armistice, which brought with it a reduction in the estimated expenditures of the government from approximately 24 billion dollars to 18 billion dollars. As a result the bill as submitted to the Senate provided for raising 6 billion dollars. "Taxes which can be easily borne amid the feverish activity and patriotic fervor of war times are neither so welcome nor so easily sustained amid the uncertainties, the depreciating inventories and the falling markets which are apt to mark the approach of peace," said Mr. Simmons in his report upon presenting the bill to the Senate December 6. After the bill had been passed by the Senate and while it was in conference, the Department of State announced that the prohibition amendment to the Constitution had been ratified by the requisite number of states so that the estimated yield of the new measure was again reduced by over half a billion dollars.

The chief objection to the bill on the part of the Senate minority when it was before that branch of Congress was to the provision which fixed the rates for 1920. They argued that it was advisable to wait until conditions for that year could be ascertained, while the majority held that the taxpayers were entitled to know in advance what they were to pay. Another consideration which the advocates of this provision might well have mentioned is the administrative advantage of being able to plan for the collection of the tax. Senator La Follette presented a report in which he made a plea for increasing the amount to be raised by taxation, and for eliminating the proposed taxes on occupations, amusements (especially the cheaper kind), freight and passenger rates, and consumption taxes generally, substituting therefor a heavy tax on luxuries and war excess profits. Senator Smoot presented some additional views in which he advocated raising practically the entire revenue from a 1 per cent sale tax on consumption goods. Senator Thomas described the excess profits feature as "arbitrary, unjust, and indefensible" and objected to the inheritance tax on the ground that it was an encroachment upon the taxing power of the states.

The Senate finally passed the bill December 23. About six hundred changes had been made in the House bill, hence the Conferees had a difficult undertaking. The greatest difficulties were over the rates of the excess profits tax. The Conferees managed to reach

an agreement on February 1 and the bill was signed by the President and became law February 24.

The law as finally enacted provides for raising about 6 billion dollars, four fifths to be from income and war excess profits taxes and one fifth from taxes on luxuries and semi-luxuries. The sources of revenue are almost the same as those of the act of September 8, 1916, as amended by the act of October 3, 1917, but the income and war excess profits taxes are expected to raise a larger proportion of the total than in the previous laws. The accompanying table (Table 1) shows: (1) the actual yield of the act of 1917 for the fiscal year of 1918; (2) its estimated yield for the fiscal year of 1919 if not amended or superseded; (3) the estimated revenues provided for by the recent House bill; and (4) the amount expected to be raised by the act of 1918. The estimated yield of the bill as passed by the Senate is not included because there is little difference between it and the act which was finally passed. The most striking new features in the law are the tax on the employment of child labor and a tax on the sale of luxuries to be paid by the purchaser.

The act is composed of fourteen sections or titles as follows:

I—General Definitions.
II—Income Tax.
III—War Excess Profits Tax.
IV—Estate Tax.
V—Tax on Transportation and Other Facilities and Insurance.
VI—Tax on Beverages.
VII—Tax on Cigars, Tobacco and Manufactures thereof.
VIII—Tax on Admissions and Dues.
IX—Excise Taxes.
X—Special Taxes.
XI—Stamp Taxes.
XII—Tax on Employment of Child Labor.
XIII—General Administrative Provisions.
XIV—General Provisions.

Title I—General Definitions. This title merely contains definitions of terms which apply to the whole bill; for example, definitions of such terms as "person," life insurance company," "domestic," "foreign," and "taxpayer."

Title II—Income Tax. (*a*) *Individuals.* The law provides for a normal tax of 6 per cent upon the first $4,000 of one's income above the exemptions allowed, and 12 per cent on the remainder. On income received after the taxable year of 1918, the rates are 4 and 8 per cent respectively. One of the confusing things in the

TABLE 1.—COMPARATIVE REVENUES. YIELD OF ACT OF 1917 AND ESTIMATED YIELD OF ACT OF 1918.[1]
(In millions of dollars)

Sources of revenue	Act of 1917 fiscal year 1918	Act of 1917 estimated yield 1919	Act of 1918 House bill	Act of 1918 for a 12-months' period[4]
II—Income tax				
Individual	$930.0	$930.0	$1482.2	$1432
Corporation	528.5	528.5	894.0	775
III—Excess profits tax	1791.0	1791.0	3200.0	2500
IV—Estate tax	47.5	75.0	110.0	60
V—Transportation				
Freight	30.0	75.0	115.0	115
Express	6.5	20.0	15.0	14
Persons	24.3	60.0	75.0	75
Oil by pipe lines	1.5	3.5	4.5	5
Seats and berths	2.2	5.0	6.0	6
Telegraph and telephone	6.3	14.0	17.0	17
Insurance	6.5	12.0	13.0	14
VI—Beverages	300.0	400.0	85.0[2]	75
VII—Tobacco	155.2	212.1	346.3	249.9
VIII—Admissions	26.4	50.0	95.0	50
Club dues	2.3	4.0	8.0	3.5
IX—Excise taxes				
Automobiles	24.0	41.5	120.0	71
Jewelry, sporting goods, etc.	13.0	35.0	70.5	60
Other taxes on luxuries			265.0	143.7
Gasoline			40.0	
Yachts and pleasure boats			1.0	1
X—Special taxes				
Capital stock	25.0	25.0	80.0	80
Brokers	.3	.8	1.8	1.2
Theatres	.9	1.1	2.5	2.1
Mail order sales			5.0	
Bowling alleys, billiard and pool tables	1.1	1.1	2.5	2.5
Shooting galleries			.4	.4
Riding academies			.05	.05
Business license tax			10.00	
Manufacturers of tobacco, cigars, etc.	.5	.6	74.2[3]	2.8
XI—Stamp taxes	18.8	32.0	32.0	31
XII—Employment of child labor				
Floor taxes				50
Total	$3,941.7	$4,317.2	$7,170.9	$5,788.15

[1] Compiled from the reports of chairmen Kitchin and Simmons.

[2] Original estimate $1,137,000,000. Reduction due to prohibition and food conservation features of food stimulation bill.

[3] Includes $72,000,000 from the tax on use of automobiles and motorcycles omitted in the bill as finally passed.

[4] It should be noted that the Act of 1918 did not become effective until February 24, 1919. The estimated revenue receipts under the existing law and the Revenue act of 1918, for the fiscal year ending June 30, 1919, are $6,077,200,000; and under the Revenue act of 1918 for the fiscal year ending June 30, 1920, are $4,184,510,000.

previous law was the fact that there were two rates (2 and 4 per cent), due to the fact that the act of October, 1917, did not repeal, but was superimposed upon, the act of September, 1916. A normal tax of 2 per cent was levied under each, though exemptions were $2,000 larger in the earlier law. From an administrative standpoint it is unfortunate that Congress kept a similar complication in the new law.

The following table shows the normal tax rates imposed by all of the recent income tax laws.

TABLE 2.—RATES OF NORMAL TAX OF THE FOUR INCOME TAX LAWS (PER CENT).

Amount of net income	1920 (Act of 1918)	1919 (Act of 1918)	1917[1]	1916	1913
0-$1,000	exempt	exempt	exempt	exempt	exempt
$1,000- 2,000	4[2]	6[2]	2[2]	"	"
2,000- 3,000	4	6	2	"	"
3,000- 4,000	4	6	4[3]	2[2]	1[2]
4,000- 5,000	4	6	4	2	1
Over 5,000	8	12	4	2	1

[1] As in effect 1917. The act of 1917 provided for a 2 per cent rate to be superimposed upon the rates of the 1916 law, though with different exemption allowances as indicated.

[2] Applicable only to income of single persons or of married persons not living with wife or husband.

[3] For heads of families and married persons the rate was only 2 per cent.

In addition to the normal tax, a surtax is imposed on incomes of over $5,000. The surtax rates of last year increased by 1 per cent for every $2,500 over $5,000, up to $20,000; thence by steps of about 4 per cent until they reached a maximum of 63 per cent on amounts in excess of $2,000,000. Under the new law, the rates increase by 1 per cent for every $2,000 increase of income from $6,000 to $100,000; thence by smaller steps until a maximum of 65 per cent is reached on amounts in excess of $1,000,000. The changes made by the Senate decreased slightly the rates upon incomes of $200,000 and less, but increased somewhat the rates upon larger incomes. Table 3 shows the surtax rates as imposed by the various acts.

The personal exemption is the same as in the act of 1917; that is, $1,000 for a single person or for a married person who is not living with wife or husband; and $2,000 for a married person living with wife or husband, or for a person who maintains a home for one or more dependents. Under the former law a person who was married on December 31 was entitled to the whole exemption. According to the most reasonable interpretation of the new law,

Table 3.—Surtax Rates.

Net Incomes		Act of 1918		Act of 1917[2]		Act of 1916		Act of 1913	
From	To	Rate	Total[1] surtax	Rate	Total[1] surtax	Rate	Total[1] surtax	Rate	Total[1] surtax
		(%)		(%)		(%)		(%)	
$5,000	$6,000	1	$10	1	$10				
6,000	7,500	2	40	1	25				
7,500	8,000	2	50	2	35				
8,000	10,000	3	110	2	75				
10,000	12,000	4	190	3	135				
12,000	12,500	5	215	3	150				
12,500	14,000	5	290	4	210				
14,000	15,000	6	350	4	250				
15,000	16,000	6	410	5	300				
16,000	18,000	7	550	5	400				
18,000	20,000	8	710	5	500				
20,000	22,000	9	890	8	660	1	$20	1	$20
22,000	24,000	10	1,090	8	820	1	40	1	40
24,000	26,000	11	1,310	8	980	1	60	1	60
26,000	28,000	12	1,550	8	1,140	1	80	1	80
28,000	30,000	13	1,810	8	1,300	1	100	1	100
30,000	32,000	14	2,090	8	1,460	1	120	1	120
32,000	34,000	15	2,390	8	1,620	1	140	1	140
34,000	36,000	16	2,710	8	1,780	1	160	1	160
36,000	38,000	17	3,050	8	1,940	1	180	1	180
38,000	40,000	18	3,410	8	2,100	1	200	1	200
40,000	42,000	19	3,790	12	2,340	2	240	1	220
42,000	44,000	20	4,190	12	2,580	2	280	1	240
44,000	46,000	21	4,610	12	2,820	2	320	1	260
46,000	48,000	22	5,050	12	3,060	2	360	1	280
48,000	50,000	23	5,510	12	3,300	2	400	1	300
50,000	52,000	24	5,990	12	3,540	2	440	2	340
52,000	54,000	25	6,490	12	3,780	2	480	2	380
54,000	56,000	26	7,010	12	4,020	2	520	2	420
56,000	58,000	27	7,550	12	4,260	2	560	2	460
58,000	60,000	28	8,110	12	4,500	2	600	2	500
60,000	62,000	29	8,690	17	4,840	3	660	2	540
62,000	64,000	30	9,290	17	5,180	3	720	2	580
64,000	66,000	31	9,910	17	5,520	3	780	2	620
66,000	68,000	32	10,550	17	5,860	3	840	2	660
68,000	70,000	33	11,210	17	6,200	3	900	2	700
70,000	72,000	34	11,690	17	6,540	3	960	2	740
72,000	74,000	35	12,590	17	6,880	3	1,020	2	780
74,000	75,000	36	12,950	17	7,050	3	1,050	2	800
75,000	76,000	36	13,310	17	7,220	3	1,080	3	830
76,000	78,000	37	14,050	17	7,560	3	1,140	3	890
78,000	80,000	38	14,810	17	7,900	3	1,200	3	950
80,000	82,000	39	15,590	22	8,340	4	1,280	3	1,010
82,000	84,000	40	16,390	22	8,780	4	1,360	3	1,070
84,000	86,000	41	17,210	22	9,220	4	1,440	3	1,130
86,000	88,000	42	18,050	22	9,660	4	1,520	3	1,190
88,000	90,000	43	18,910	22	10,100	4	1,600	3	1,250
90,000	92,000	44	19,790	22	10,540	4	1,680	3	1,310
92,000	94,000	45	20,690	22	10,980	4	1,760	3	1,370
94,000	96,000	46	21,610	22	11,420	4	1,840	3	1,430
96,000	98,000	47	22,550	22	11,860	4	1,920	3	1,490
98,000	100,000	48	23,510	22	12,300	4	2,000	3	1,560
100,000	150,000	52	49,510	27	25,800	5	4,500	4	3,560
150,000	200,000	56	77,510	31	41,300	6	7,500	4	5,560
200,000	250,000	60	107,510	37	59,800	7	11,000	4	7,560
250,000	300,000	60	137,510	42	80,800	8	15,000	5	10,060
300,000	500,000	63	263,510	46	172,800	9	33,000	5	20,060
500,000	750,000	64	423,510	50	297,800	10	58,000	6	35,060
750,000	1,000,000	64	583,510	55	435,300	10	83,000	6	50,060
1,000,000	1,500,000	65	908,510	61	740,300	11	148,000	6	80,060
1,500,000	2,000,000	65	1,233,510	62	1,050,300	12	208,000	6	110,060
2,000,000	†	65		63		13		6	

[1] Total surtax due on highest amount in each bracket.

[2] As in effect 1917; that is, the acts of September, 1916, and October, 1917.

however, a person married for only part of the year is entitled to such part of the total exemption of $2,000 as that part of the year is of the whole year.[2] It will be remembered that the acts of 1913 and 1916 placed the exemptions at $3,000 and $4,000. Because of the lowered exemption and the added rates the act of 1917 allowed an extra exempton of $200 for each "child," a term construed by the Treasury Department in a very literal sense to mean a "blood child of the first degree or an adopted child." The new law grants this additional exemption for each "dependent person," thus wiping out one of the unfair distinctions of the former law.

The following items are exempt from taxation and do not have to be reported on the income tax returns: (1) proceeds of life insurance policies paid upon the death of the insured; (2) amounts received as a return of premium paid under life insurance endowment or annuity contracts; (3) the value of property acquired by gift or bequest (but the income from such property shall be included in the gross income); (4) interest upon obligations of a state, territory, or of any political subdivision thereof, or the District of Columbia, or upon bonds of the United States to the extent provided for in the acts authorizing the issue thereof; (5) income of foreign governments from investments in the United States; (6) amounts received through accident or health insurance or under workmen's compensation acts or the amount of damages received on account of injuries or sickness; (7) income derived from any public utility or the exercise of any essential governmental function and accruing to any state, territory, or subdivision thereof, or the District of Columbia; (8) the amount received during the present war by a person in the military or naval forces of the United States for active service in such forces. The first four provisions are the same as in the previous law. The sixth was allowed during part of last year by a Treasury decision.

The law is not entirely clear as to the taxing of income received by state officials. Such income was specifically exempt under the act of 1917. In drawing up the new act the House faced the issue squarely and inserted a clause "including in the case of the President of the United States, the judges of the Supreme and inferior courts of the United States, and all other officers and employees, whether elected or appointed, of the United States or of any state,

[2] The income tax forms 1040 and 1040A were gotten out in accordance with this interpretation, but an office order of March 10 provided that the marital status of December 31 should determine the exemption for the entire year.

Alaska, Hawaii or any political subdivision thereof or the District of Columbia, the compensation received as such." This was struck out by the Senate Committee but was restored by the Conferees except that the word "state" was omitted. Thus the law may be interpreted either way, for the clause "or any political subdivision thereof" might logically be held to include a state; but on the other hand omitting the word "state" would imply the intention to exempt such income. There is certainly no very good economic or social reason why this large class should be exempt, but even if specifically included the courts would probably hold that the case of *Collector* v. *Day*[3] still furnishes precedent for the rule that taxing the salary of a state official is interfering with the functions of a state.[4] There is good constitutional authority for not taxing the compensation of the President and judges of the United States during the terms of office for which they had been chosen when the law was passed.[5]

The law as finally passed provided for returns to be filed on a net income basis as heretofore. The Senate provision was for a gross income basis; that is, every one who received over $1,000 or $2,000, according to his marital status, was to file a return, regardless of whether the deductions relieved him from liability to the tax or not. Under such a provision the government instead of the individual would have been the judge of whether or not he should pay a tax. This is certainly the more desirable principle, and by this method some revenue would have been received which will be missed, but it is rather doubtful whether it would have compensated for the enormous task of getting these returns filed, particularly in view of the short time which the Bureau of Internal Revenue had to prepare for the collection.

In computing net income a taxpayer may deduct the following items in connection with business or any transaction entered into for profit: (1) expenses incurred in carrying on such business, (2) losses not compensated for by insurance or otherwise, (3) depreciation of property, and (4) bad debts. Deductible expenses which are not incurred in business are limited to such items as (1) taxes, except those assessed against local benefits tending to increase the value of the property, (2) interest, except on indebtedness incurred to purchase obligations interest on which is tax exempt,

[3] Decided December, 1870. 11 Wallace 113.

[4] The "Regulations" which have been recently issued by the Bureau of Internal Revenue hold that income received from a state should not be reported as taxable income.

[5] Article III, Sec. I.

other than United States bonds, (3) losses of property if arising from fire, storm or other casualty or theft, if not compensated for by insurance. In general there is a little more generosity in the matter of deductions than under the former law, though there are still many inconsistencies. For example, a business man who must take a street car or train to work cannot deduct car fare as a business expense, yet a man who owns an automobile may claim depreciation and upkeep if he uses it in his business. Perhaps in this case the trouble lies more with the regulations than with the law.

Several features of the new law attempt to remedy obviously unfair provisions in the former laws. One difficulty arose over the question of taxing dividends paid out of earnings accumulated in previous years. As heretofore, such earnings are exempt from the normal tax in the hands of the stockholder. In cases of this kind, there are two possibilities: (1) to tax the dividend when it was received by the stockholder, or (2) to tax it when earned by the corporation. It seems unjust to make a taxpayer pay the rates of the 1917 law, if, for example, the dividend was earned in 1916. On the other hand, it is not fair to allow the recipient of a large income to escape a tax merely by stating that the dividends he received were paid out of 1916 earnings.

The act of 1917, when followed literally, caused equally difficult problems. It was necessary to know the total profits earned for the periods between declarations of dividends in 1917; and if this amount was not sufficient to cover the dividend actually distributed the difference might be allocated to a previous year. As a matter of fact, most corporations pay their dividends out of earnings of a previous year. The House bill provided that all distributions of earnings were to be taxed according to the rates in effect during the year in which the dividend was received. The Senate Finance Committee struck out this section and inserted one which was practically like that in the 1917 law, but when the bill was before the Senate it limited the provision to stock dividends received in 1918, and the Conferees further restricted it to "stock dividends received between January 1 and November 1, 1918, or declared in this period and received after November 1 and before 30 days after the passage of the act." This means that any dividend except a stock dividend received in this period shall be taxed at the rates prescribed by law for the year in which the dividend was received.

The question of the constitutionality of taxing stock dividends has not yet been settled. The acts of 1916 and 1917 unlike the

act of 1913 specifically provided that stock dividends were taxable. Hence the decision of the Supreme Court, which stated that stock dividends are not taxable under the act of 1913,[6] may not apply to the other acts. The decision was made on the ground that a stock dividend is merely a distribution of capital. In a recent case before the United States District Court of the Southern District of New York the same ruling was made; and, since this case involved the act of 1916, the decision was given that the section of that act which provided for taxing stock dividends was unconstitutional.[7] The case has been appealed to the Supreme Court and if this decision is upheld the acts of 1916, 1917, and 1918 will all be affected.

There will undoubtedly be some difficulty over the distinction between dividends of a personal service corporation[8] and dividends of other kinds of corporations. Since profits of the former are taxable in the hands of the stockholders or members, any distribution made by such a concern in 1918 is not considered a dividend and must be included in the income upon which a normal tax is paid unless there is satisfactory evidence given that this was paid out of earnings upon which the income tax had already been paid.

Payment at the source, as in the Revenue act of 1917, is limited to tax-free-covenant bonds and to income of non-resident aliens. In the latter case it is without doubt the best policy. In the former it raises several interesting problems. The act of 1917 stated that a 2 per cent normal tax was to be withheld by the debtor corporation. If exemption from the normal tax was claimed by the taxpayer, a certificate to that effect was filed with the obligor. In most cases this was probably only a theoretical withholding. When the rates were increased in the new bill, the corporations who issued these bonds seem to have found themselves in a more difficult situation than they had ever dreamed of. The wording of the new law apparently gives them a loophole to escape part of the tax for it requires the corporation to "deduct and withhold 2 per cent." The normal tax being 6 per cent on taxable incomes under $4,000 and 12 per cent on larger incomes there still remains a 4 per cent and possibly a 10 per cent tax to be paid by the obligee for which, according to the terms of most agreements,

[6] *Towne* v. *Eisner*, decided Jan. 7, 1918. 242 Fed. Rep. 702.

[7] *McComber* v. *Eisner*, decided Jan. 23, 1919.

[8] A personal service corporation is defined as one in which capital is not a material income-producing factor and whose income is due primarily to the activities of the principal owners or stockholders who are themselves regularly engaged in the active conduct of the affairs of the corporation.

he is to be reimbursed. Bonds issued recently limit this agreement to a tax of 2 per cent. The law seems to require a violation of contract, but the attitude of the government has been that it is a matter between the corporation and the bondholder and so long as the tax is paid, it cares not who pays it.

In view of the higher rates, there have been inserted several provisions to prevent undue hardship. One of the most needed is that which allows deduction of loss incurred in "any transaction entered into for profit" instead of limiting deductible losses to those sustained in a "regular business," or to losses from fire, storm, or other casualty not compensated for by insurance. Other relief provisions are those allowing deductions of net losses. One is to take care of losses incurred between October 31, 1918, and January 1, 1920, in connection with the taxpayer's regular business or the sale of plant machinery and vessels contributing to the prosecution of the war. The other is to take care of losses sustained as a result of the reduction of the value of the inventory for the taxable year or from actual payments after the close of the taxable year in pursuance of contracts entered into during the year.

A few improvements in administrative features should be mentioned. By providing four dates for payments of the tax, and by allowing individuals to file returns according to a fiscal year, not only will taxpayers be convenienced but the collectors will be given "year 'round jobs" instead of work for only a few months of each year. This should mean better office management. At first appearance one might think this would increase the expense. The collectors and most of the deputies, however, are in the permanent employ of the service, and buildings and offices are owned or leased for long periods of time. In fact, the cost of collecting each dollar of internal revenue has decreased materially in spite of the increasing work involved.[9] Another improvement is the method of adjusting refunds. Instead of the former long red tape method, taxes paid in previous years in excess of the amount due

[9] TABLE 4.—EXPENSE OF COLLECTING INTERNAL REVENUE.

Year	*Per cent*
1912	1.57
1913	1.50
1914	1.46
1915	1.50
1916	1.22
1917	.86
1918	.32

(Report of Secretary of the Treasury, 1918, pp. 491-92.)

may be credited against any income, war profits, or excess profits taxes due.

Of the administrative features which should still be improved, the most prominent is that in the case of a taxpayer who reports partnership profits for a different fiscal year than his own. If part of the partnership profits are for 1917, the rates of 1917 are to apply to that part. The difficulty which arises in this case is to determine not only whether it is a 2 per cent or 4 per cent rate, but also how to pro-rate the personal exemption. The law provides also for allowing as a credit the taxpayer's proportionate share of dividends and interest on bonds issued by the United States which were received by the partnership. The law regulating the amount of interest from Liberty Bonds free from tax is a most complicated and ambiguous measure,[10] and, when it is made more complex by attempting to pro-rate and credit the interest, the taxpayer is apt to consider the time and trouble of making the calculations worth more than the allowable deduction.

Title II—Income Tax. (*b*) *Corporations.* The second part of the income tax law deals with corporations. Partnerships and "personal service corporations" are not taxable as corporations, but the profits are taxed as income of the individual partners or stockholders. With these exceptions, the list of corporations which are not subject to this section of the income tax reads very much the same as in former laws. It includes labor or horticultural organizations, mutual savings banks not having a capital stock represented by shares, fraternal beneficiary societies or orders, civic leagues, clubs organized for pleasure, and similar organizations. The Senate inserted a special section dealing with life insurance companies but this was struck out by the Conferees.

The rate prescribed for the taxable year 1918 is 12 per cent; that for 1919, 10 per cent. The House proposal was for a much

[10] For two years after the expiration of the war there shall be exempt:

1. Interest on bonds of the Fourth Liberty Loan, the principal of which does not exceed $30,000.

2. Interest received after January 1, 1918, on amount of bonds of the first loan converted December 15, 1917, or May 9, 1918; of the second loan, converted or unconverted, the principal of which does not exceed $45,000, providing that no such exemption shall be allowed on interest from bonds the principal of which exceeds one and one half times the amount of the Fourth loan, originally subscribed for and still held.

3. Interest on bonds issued upon conversion of those of the first to those of the fourth the principal of which does not exceed $30,000.

In addition to the above, there is a permanent exemption of interest received from bonds of all issues the principal of which does not exceed in the aggregate $5,000.—Section I of the Supplement to the Second Liberty Bond act approved September 24, 1918.

more complicated scheme, namely, "18 per cent of the amount of the net income in excess of the credits . . . provided that the rate shall be 12 per cent upon so much of this amount as does not exceed the sum of (1) the amount of dividends paid during the taxable year, plus (2) the amount paid during the taxable year out of earnings or profits in discharge of bonds and other interest bearing obligations outstanding prior to the beginning of the taxable year, plus (3) the amount paid during the taxable year in the purchase of obligations of the United States issued after September 1, 1918. . . ." The distinction between the rates on the amount distributed as dividends and other earnings was made so as to encourage distribution of profits and thus more surtax would be paid by individuals.

In computing the tax a corporation may credit: (1) the amount received as interest upon obligations of the United States, (2) the amount of excess profits tax imposed by the United States, (3) in the case of domestic corporations, income and excess profits taxes paid to any foreign country or possession of the United States, and $2,000. Among the allowable deductions is included such part of the cost of amortization of buildings or vessels used in the war, or contributing to the prosecution of war, as had been borne by the taxpayer. A special provision was made by the Senate to take care of cases in which the taxpayer had discovered oil and gas wells or mines on or after March 1, 1913, and where the fair market value upon which depreciation would ordinarily depend is materially disproportionate to cost. The allowance for depletion and depreciation is to be based on the fair market value of the property on the date of discovery or within twelve months thereafter. In the final enactment "twelve months" was changed to "thirty days." Experience under the act of 1917 proved that some such provision as this was needed.

One of the interesting new administrative features is that requiring consolidated returns by companies which are affiliated. Only one specific credit is allowed, so that in all probability this will mean more revenue to the government, though equally convincing data have been produced on both sides of the question. The law states that two or more corporations shall be deemed to be affiliated "if one corporation owns directly or controls through closely affiliated interests or by a nominee substantially all the stock of the other or others. . . ." Just what is meant by "substantially all the stock" will doubtless have to be settled by the courts.

In order to prevent corporations from accumulating their profits so that taxpayers would be relieved of paying surtax on dividends, the law states that if a corporation is formed or availed of for this purpose, the corporation is not subject to tax but the stockholders or members shall be taxable as in the case of a partnership or personal service corporation. "The fact that any corporation is a mere holding company or that the gains and profits are permitted to accumulate beyond the reasonable needs of the business shall be prima facie evidence of a purpose to escape the surtax; but the fact that gains and profits are in any case permitted to accumulate and become surplus shall not be construed as evidence of a purpose to escape the tax unless the Commissioner certifies that in his opinion such accumulation is unreasonable for the purposes of the business." Under the act of 1917, an additional tax of 10 per cent was levied upon the amount of earnings which remained undistributed, except such amounts as were employed in the business or invested in obligations of the United States.

The law provides for the same informational returns as the previous act, that is, they are required from those paying out salaries, interest, rent or other profits or income of or at the rate of $1,000 or more per year, and they may be required from (a) those collecting interest on bonds or similar obligations of corporations, (b) those collecting interest on bonds and dividends from foreign corporations, (c) stockbrokers. It is rather surprising that the stockbroker group was included, for last year the forms were not even printed.

Title III—War Excess Profits Tax. As suggested by the title given this section, the Senate combined two methods of reaching large profits and those which were earned by reason of the war. The rates are as follows (for 1918):

1st bracket—30 per cent of the amount of the net income in excess of the excess profits credit and not in excess of 20 per cent of the invested capital.

2d bracket—65 per cent of the amount of the net income in excess of 20 per cent of the invested capital.

3d bracket—The sum, if any, by which 80 per cent of the amount of the net income in excess of the war profits credit exceeds the amount of tax computed under the first and second brackets.[11]

[11] A simple example may show more clearly how these taxes would be computed.

The A company has a capital of $100,000, average pre-war net income $7,000 and a net income for the taxable year of $75,000.

The excess profits credit will be $3,000 plus 8 per cent of the invested

For the taxable year 1919, the rate of levy under the first bracket is reduced to 20 per cent, that of the second to 40 per cent, and the third is omitted. But in order to reach "war profits" a clause was inserted by the Conferees taxing the net income of every corporation which derives more than $10,000 from any government contract made between April 6, 1917, and November 11, 1918.

As passed by the House, these two methods were separated and the corporation was to use whichever was higher. The Senate amendment has accomplished the same result in a much more desirable way.

The new law has given up the excess profits tax at the flat rate of 8 per cent which was imposed last year upon amounts over $6,000 received by individuals and corporations from business having insignificant amounts of invested capital. Hence the excess profits tax now applies only to corporations having invested capital.

A small corporation is often at a disadvantage when the tax depends on the relation between its invested capital and its income because the amount of credit is based on invested capital. For this reason a relief section was inserted to apply to such cases. It states that the tax for the year 1919 shall not be more than (1) 30 per cent of the amount of net income in excess of $3,000 and not in excess of $20,000 plus (2) 80 per cent of the amount of net income above $20,000. For 1920 the rates are reduced to 20 per cent and 40 per cent of these amounts respectively.

The credits allowed in computing the excess profits tax are (a)

capital, a total of $11,000. The amount of the net income taxable at each rate of the excess profits tax will be as follows:

(1) In excess of the credit and not in excess of 20 per cent of the invested capital ($20,000-$11,000) $9,000
(2) In excess of the invested capital ($75,000-$20,000) $55,000

The rate on the amount in the first bracket is 30 per cent, the second 65 per cent, hence the tax is 30 per cent of $9,000 ($2,700) plus 65 per cent of $55,000 ($35,750), a total of $38,450.

The war profits credit will be $3,000 plus $10,000 (10 per cent of the invested capital), a total of $13,000.
Net income in excess of the credit ($75,000-$13,000) = $62,000
80 per cent of $62,000 is $49,600.
$49,600-38,450 = $11,150, war profits tax.
The normal tax of this company would be $2,808.
The total tax due is therefore as follows:

Normal tax	$2,808.00
Excess profits	38,450.00
War profits	11,150.00
TOTAL	$52,408.00

Under the 1917 law, the total tax would have been $35,336.00

$3,000 and (b) an amount equal to 8 per cent of the invested capital for the taxable year.

The "war profits credit" is (a) $3,000 and (b) an amount equal to the average net income of the corporation for the pre-war period (1911, 1912, 1913) plus or minus, as the case may be, 10 per cent of the difference between the average invested capital for the pre-war period and the invested capital for the taxable year. If the amount computed under (b) is less than 10 per cent of the invested capital for the taxable year, or if the corporation had no net income for the pre-war period, the war profits credit is the sum of $3,000 and 10 per cent of the invested capital for the taxable year.

If the corporation was not in existence during the whole of at least one calendar year during the pre-war period, the war profits credit shall be the sum of $3,000 and an amount equal to the same percentage of the invested capital for the taxable year as the average percentage of net income is to invested capital for the pre-war period of corporations engaged in a trade or business of the same general class as that conducted by the taxpayer, provided that it shall not be less than 10 per cent of the invested capital for the taxable year.

Invested capital includes: (1) actual cash paid for stock or shares; (2) actual cash value of tangible property; (3) paid in or earned surplus and undivided profits; (4) intangible property actually exchanged for stock or shares issued therefor, not exceeding (a) the actual cash value of such property at the time paid in, (b) the par value of the stock or shares issued therefor, or (c) in the aggregate 30 per cent of the par value of the total stock or shares of the corporation outstanding on March 3, 1917, whichever is lowest; (5) intangible property (*i.e.*, patents, copyrights, secret processes, goodwill, trademarks, *et cetera*) for stock or shares not exceeding (a) the actual cash value of such property at the time paid in, (b) the par value of the stock or shares issued therefor, or (c) in the aggregate 30 per cent of the par value of the total stock or shares of the corporation outstanding at the beginning of the taxable year, whichever is lowest. The term "invested capital" does not include borrowed capital.

From the invested capital must be deducted a percentage of the invested capital equal to the percentage which the amount of inadmissible assets (securities, the interest from which is tax exempt) is of the amount of admissible assets held during the tax-

able year. This deduction cannot be made in the case of a dealer in securities, an insurance company, a bank or a loan and trust company, which includes all income from inadmissible assets in computing its net income for taxable purposes. This last section was written to prevent discrimination against any business dealing largely in tax exempt securities.

In order to encourage the production of gold, the income received by a corporation engaged in gold mining is exempted from excess profits taxes. This subsidy is unwise. In fact, the general stock of money in the United States now includes over 60 per cent more gold than it did August 1, 1914. The trouble is due to the excess of credit inflation. The natural, automatic, and salutary check to such inflation, namely, the high cost of gold, has begun to operate. For the benefit of the country at large it would be just as well if this business became unprofitable so that a smaller amount of gold would be produced and prices would fall. Certainly there should not be any artificial stimulation of gold output.

The difficulties involved in determining the meaning and interpretation for tax purposes of such terms as "invested capital," and "intangible assets" are shown by the zealous and lengthy attempts to define and explain these terms. After these efforts, which cover several pages of print, there is added in apparent desperation a section which provides a new method for making the computation. In the following cases the tax shall be the amount which bears the same ratio to the net income of the taxpayer as the average tax of representative corporations engaged in a like or similar trade or business bears to their average net income for such year:

a. Where the commissioner is unable to determine the invested capital. . . .

b. In the case of a foreign corporation.

c. Where a mixed aggregate of tangible property and intangible property has been paid in for stock or for stock and bonds and the commissioner is unable satisfactorily to determine the respective values of the several classes of property at the time of payment or to distinguish the classes of property paid in for stock and for bonds.

d. Where upon application by the corporation, the commissioner finds and so declares of record that the tax if determined without benefit of this section would, owing to abnormal conditions affecting the capital or income of the corporation, work upon the corporation an exceptional hardship evidenced by gross disproportion between the tax computed without benefit of this section and the tax computed by reference to representative corporations.

Besides these "special" provisions for computing the tax, there are numerous relief clauses providing for the amortization or obsolescence of property used in the war which cannot be used in business after the war, and providing also for cases in which the net income is abnormally high due to the realization of gains or profits earned during a period of years or from the sale of property, the principal value of which is due to exploration or prospecting by the taxpayer. If the business has been reorganized the tax is to be computed according to regulations prescribed by the commissioner. With all these provisions it seems that there should be no hardship suffered by any corporation.

It would appear at first glance that an 80 per cent tax is high, but it is justly so, for nothing seems quite so unethical as to have a few individuals make a fortune out of a world calamity. In reality, however, the law will reach much less than 80 per cent of war profits because of the credits and exemptions which may be deducted. For example, there is a specific exemption of $3,000, and a deduction of a certain per cent of the invested capital from the net income, computed after the deduction of all business expenses. The minimum rate of this credit or deduction is 10 per cent, which, as has been pointed out in Senator La Follette's report, may be a much larger percentage of the net income. If the profits are 10 per cent of the invested capital, the deduction is 100 per cent of the income.

There are other considerations which must be taken into account in any discussion of war profits taxes. According to Professor Friday's estimates of the national income, the increase was from approximately 30 billion dollars in 1910 to 65 billion in 1917.[12] Of this, the income of industrial organizations increased from 19 billions to almost 49 billions, while commercial and professional incomes increased from 11 billions to 15 billions. This great increase was due partly to the fact that there was an increased output of goods. More laborers were working and they worked more continuously for there were fewer strikes. The second reason is that about 15 billions had been invested in new machinery. There is every indication that dividend payments for 1918 were slightly less than for 1917. Financial, public utility, and railroad corporations will probably show net incomes smaller than in 1917. Dividends of miscellaneous corporations and mercantile corporations are also likely to decrease slightly. If these

[12] David Friday, "Taxable Income of the United States," *Journal of Political Economy,* December, 1918.

assumptions are correct, the taxable incomes of corporations and also of individuals will be smaller in 1919 than they were in 1918. This is an added reason for increasing the war profits tax. Corporate net income for 1917 was about 10.5 billions, for 1918 not quite 10 billions; but the invested capital for 1918 was 4 billion dollars greater than in 1917. Deducting 10 per cent of the invested capital as the law provides leaves a little over 4 billion dollars subject to war profits tax. Of this the tax will reach only about 2.4 billions. Obviously, this is the last opportunity to reach war profits. The amount needed to finance the government, above that raised by taxation, will have to be raised by bonds, thus incurring further obligations for the payment of interest and raising prices by inflation, which will add to the already huge debt and interest burdens besides adding to the inflation which has resulted in such high prices.

Title IV—Estate Tax. Instead of a tax on the transfer of the estate, as the previous law and the recent House bill provided, the Senate provided for a tax on the amount inherited by each beneficiary, regardless of his or her relation to the decedent. The Conferees reinserted the House provision except that they lowered the rates. Property inherited from a person dying during the war, or within one year after its termination, from injuries received or disease contracted in such service is not subject to this tax.

The rates in the new law are somewhat lower than in the previous law for estates of $1,500,000 and less, and they are much lower for all amounts than the rates of the House bill as Table 5 shows.

This tax was looked upon as a kind of encroachment on the rights of the states by at least one member of the Senate Finance Committee. To be sure most states have inheritance taxes, but this is not a sufficient reason for its abandonment by the federal government. Such a tax provides a simple method for getting revenue, and the expenses of the government are so great at this time that every reasonable source should be utilized. Funds thus secured might well be devoted to paying the war debt or be put into capital assets instead of being used for current expenses. The rates of the present law are not so high as to discourage seriously either industry or thrift.

Title V—Tax on Transportation and Other Facilities and Insurance. The tax on the transportation of freight remains at 3 per cent as under the act of 1917; that on tickets also remains at

TABLE 5.—ESTATE TAX RATES.

Amount of net estate[1] between	Rates on net estate (per cent)		
	Act of 1917	Act of 1918 House bill	Act of 1918 as approved
0- $50,000	2	3	1
$50,000- 150,000	4	6	2
150,000- 250,000	6	9	3
250,000- 450,000	8	12	4
450,000- 750,000	10	15	6
750,000- 1,000,000	10	15	8
1,000,000- 1,500,000	12	18	10
1,500,000- 2,000,000	12	18	12
2,000,000- 3,000,000	14	21	14
3,000,000- 4,000,000	16	24	16
4,000,000- 5,000,000	18	27	18
5,000,000- 8,000,000	20	30	20
8,000,000-10,000,000	22	35	22
10,000,000	25	40	25

[1] An exemption of $50,000 is allowed in computing the value of net estate of residents of the United States.

8 per cent; but the rate on seats, berths, or staterooms in parlor cars or sleeping cars has been reduced from 10 per cent to 8 per cent. This change was made because the United States Railroad Administration plans to issue a ticket covering both transportation and Pullman accommodations.

The rate of the tax on telephone, telegram, or cable messages, for which the charge is over 14 cents but not over 50 cents remains at 5 cents, but a new tax of 10 cents has been levied in cases where the charge is over 50 cents. Another new section is that which levies a tax of 10 per cent of the amount paid to any telegraph or telephone company for a leased wire or talking circuit special service except when such service is used by the press, or "in the conduct by a common carrier or telegraph or telephone company of its business as such." With this provision the House estimated it would raise 16 million dollars of revenue from extra taxes upon telephone and telegraph business instead of 6 millions as under the act of 1917.

The rates of taxes on insurance as provided in the House bill were as follows: 8 per cent on each $100 for which a life was insured, except that on policies of $500 or less issued on the industrial or weekly or monthly plan the rate was 40 per cent of the first weekly premium or 20 per cent of the amount of the first monthly premium; for policies of insurance against fire, lightning

or casualty, 1 per cent on each dollar of the premium charged. The Senate amended this section by striking out the above and inserting a provision for levying a tax of 1 per cent of the excess of the gross amount of premiums charged for policies issued by mutual insurance companies over the amount of premiums paid for reinsurance, return premiums, and premiums refunded; in the case of other companies the rates were differentiated—for example, 1½ per cent of such excess in the case of casualty insurance, 2¼ per cent in the case of marine and inland insurance. This change was necessitated by the fact that the Senate inserted a special section in Title II (Income Tax) providing for the taxing of insurance companies. The bill as finally passed follows the House provisions.

It is estimated that about 200 million dollars will be raised by the taxes provided for in this title, of which 75 million will be from the tax on freight, 60 million from the tax on passenger tickets, 5 million from that on seats and berths, 16 million from telegraph and telephone, and 10 million from that on insurance.

Title VI—Tax on Beverages. The tax as levied in this title by the House was expected to raise over a billion dollars, but owing to the regulations passed for limiting the production and sale of alcoholic beverages this estimate was reduced by 500 million dollars.

The Senate Committee revised the rates downward, leaving that of non-beverage alcohol at $2.20 a gallon, the same as under the 1917 law, and reducing the tax on distilled spirits drawn for beverage purposes from $8 to $6.40, double the rate previously levied, in order to secure the greatest possible amount of revenue. Inasmuch as the prohibition amendment has been ratified and goes into effect before the war prohibition measure expires, it is estimated that only $75,000,000 will be yielded by this tax.

The provisions for securing records of the amount of spirits in cisterns, tanks, or containers of any kind are left indefinite: "The Commissioner . . . is hereby empowered to prescribe all necessary regulations relating to the drawing off, transferring, gauging, storing and transporting of such spirits; the records to be kept and returns to be made; the size and kind of packages and tanks to be used, the marking, handling, numbering and stamping of such packages and tanks to be used. . . ." It is well known that this is one of the most difficult of all taxes to assess. The deputy collector goes into a warehouse and has no knowledge, other

than the word of the owner or manager, as to the contents of any of the containers. The law very properly provides for the installation of accurate meters, without which there is every chance for undue influence being brought to bear upon the officer.

One of the provisions of this title places a tax of one cent for each ten cents or fraction thereof paid for all goods bought at a soda fountain. The tax is not high enough to discourage wasteful or unnecessary consumption nor will it bring in much revenue to the government. It will prove a most annoying measure from the taxpayer's point of view and will be difficult of collection, because there is no way of finding out whether these pennies are properly put aside for Uncle Sam or get into the pockets of the dispenser of sundaes.

Title VII—Tax on Cigars, Tobacco, and Manufactures thereof. The rates of tax on manufacturers or importers of cigars, cigarettes, etc., as passed by the House were reduced very noticeably by the Senate. But even so, they are higher than last year. The rates on cigars are from $1.50 to $15 per thousand according to the weight and price at which they are to retail; on cigarettes, from $2.90 to $7.20 per thousand; on tobacco and snuff, manufactured or imported, 18 cents a pound. Under the act of 1917 the rates on cigars were from $1 to $10, on cigarettes from $2.05 to $4.80, on tobacco and snuff 13 cents per pound. The floor stock tax on cigars, cigarettes, and tobacco is the difference between the tax paid under existing law and the tax imposed by the new bill. A new section was added which repealed the so-called "free-leaf act" appearing in the act of August 5, 1909. By this provision retail dealers in leaf tobacco carried on their business with no tax liability. Another improvement is the section which provides for better records of the disposition and handling of leaf tobacco. This is one of the cases where the rates should be as high as the traffic will bear.

Title VIII—Tax on Admission and Dues. The rates of tax on admissions are left practically the same as in the previous act, though in one or two cases are increased slightly. The House proposed a 20 per cent tax on admissions over 10 cents. In case tickets are sold by "scalpers" or others at a price not to exceed 50 cents more than the established price, the House rate was 5 per cent, the Senate 10 per cent. When the price is more than 50 cents in excess of the regular price, the rate is 20 per cent; the rate proposed by the House was 30 per cent. A rather compli-

cated clause has been inserted taxing amounts for admissions to cabarets or similar places to which the charge of admission is included in the price paid for refreshments. The law states that in this case, the amount paid for admission is to be considered 20 per cent of the amount paid for refreshments and the tax is to be paid by the person paying for such service. This will probably be confusing for patrons to compute, a nuisance to the manager of the place, and will probably yield a very small amount of revenue, but it may discourage extravagance.

The tax rate on club dues remains at 10 per cent of annual dues and initiation fees amounting to over $10, although the House proposed a rate of 20 per cent. The Senate struck out the House provision which made the tax applicable to dues paid to produce exchanges, boards of trade and similar organizations.

Title IX—Excise Taxes. This section is divided into two parts, the first deals with cases in which the tax is to be paid by the manufacturer, and the second in which the tax is to be paid by the purchaser. Those of the first group are makers of such luxuries as automobiles, musical instruments, tennis rackets, canoe paddles, pleasure canoes if sold for more than $15, firearms, cameras, hunting knives, chewing gum or substitutes therefor, candy, hunting garments, articles made of fur, toilet soap, etc.

Purchasers shall pay a tax of 10 per cent of the amount paid for such articles as the following: picture frames costing over $10 each, purses over $7.50, fans over $1, women's hats over $15, shoes over $10 a pair, waists over $15, men's shirts over $3, men's silk hose over $1 a pair. The House bill provided for taxes on the purchase of women's suits and coats retailing for more than $50, on dresses retailing for over $40, and on men's suits and coats retailing for over $50 each, but the Senate did not concur. It is, of course, difficult to find the marginal price at which necessities become luxuries, but there certainly could have been found some limit above which the purchase prices of suits and coats represent ability to pay a tax.

Taxes such as those provided for in this title may serve one of two purposes: either to provide revenue or to discourage the buying of luxuries. The two results are not likely to be achieved in the same bill, because if the rates are high enough to accomplish the latter, not as much revenue will be produced as if the rates were lower. The higher rates as provided by the House might well have been retained, for the days are not yet passed when we as a coun-

try can afford to abandon the practice of thrift which became popular as well as patriotic during the war.

Some criticism has been made against this method of raising revenue because it will entail entirely new machinery for collection. The difficulties in this respect seem to be more than overcome by the advantages which are secured.[13]

Title X—Special Taxes. This title contains provisions for laying an excise tax on manufacturers of cigars, persons carrying on businesses such as those of corporations, brokers, and proprietors of theaters, museums, bowling alleys, riding academies, breweries, circuses, and passenger automobiles for hire. To the extent that the tax reaches those who would not pay a tax under any of the other provisions, this may prove a desirable "catch all," though it is open to some objections. For example, the law taxes a corporation $1 for each $1,000 over $5,000 of the amount of its assets at the close of its fiscal year, thus taxing a third time those taxable under Titles II and III. Manufacturers of tobacco pay taxes under this Title and also under Title VII. It would save much confusion and unnecessary difficulty in collection if the rates under one title were sufficient to cover all taxes in any particular case. The House proposed a kind of federal license for motorcycles and automobiles which was omitted by the Senate.

The last part of the title provides for a tax on importers, manufacturers, or sellers of opium and other habit-forming drugs. The rates are as follows: importers, manufacturers, producers, or compounders, $24 a year; wholesale dealers $120 a year; retailers $6; doctors, dentists, and others $3; and a further tax of one cent per ounce shall be paid upon such drugs produced, sold, or removed for consumption or sale. This is to take the place of the act of December, 1914, which provided for a tax of $1 to be paid by a manufacturer or vendor of opium, but exempted doctors, dentists, and those who used these drugs in their professions. It has been held by the courts[14] that, under this act, a person having in his possession any habit-forming drugs is not criminally liable unless he is a dealer. This has made enforcement of the act very difficult. The law of 1918 provides that the possession of an unstamped package shall be prima facie evidence of violation of the act.

13 The House passed a resolution March 1, 1919, providing for the repeal of the luxury tax and the Senate was expected to concur, but this measure, along with many others, was killed by the filibuster which occupied the closing hours of the session.

14 The Supreme Court in the Jim Fuey Moy case, June 5, 1916. 241 U.S. 394.

This is certainly one of the taxes which ought to be heavy enough to drive out the business except for medicinal purposes, if there is no better way of accomplishing this end. Any such tax requires a large force of alert and dependable officers to prevent smuggling and evasion of every kind.

Title XI—Stamp Taxes. These taxes are practically the same as last year, that is, they apply to certificates of indebtedness, bonds, certificates of capital stock, the sale of produce on an exchange, deeds, proxies for voting at any election of officers, except religious or charitable societies, power of attorney, and parcel post packages where the postage amounts to 25 cents or more. Such taxes as these are simple from the administrative point of view and yield some revenue. For the fiscal year 1918, 8 million dollars was raised from such a tax, and it is estimated that 31 million dollars will be raised this year.

Title XII—Tax on Employment of Child Labor. This is a clear case of a tax being levied for other than revenue purposes. It was passed to take the place of the child labor law which the Supreme Court declared unconstitutional last June in a five to four decision.[15] There was some discussion in the committee as to whether or not this section of the law is constitutional. It is common practice to insert in revenue bills "riders" of this character.

The law provides for levying a tax of 10 per cent of the net profits of any mine, quarry, mill, cannery, workshop, factory, or manufacturing establishment in which are employed children under sixteen in the case of mines or under fourteen in the cases of any of the other establishments named.

In computing net income, there may be deducted from gross income the cost of raw materials, running expenses, interest on business obligations, taxes, and losses. Provision is made to prevent any person from selling the products of his establishment at less than fair market price by considering for tax purposes that the gross amount received for the year or from the sale is the amount which would have been received if the goods had been sold at the fair market price.

There will be the same difficulty found in administering this law as in other laws in which the age of children must be ascertained. A country should provide for birth registration before attempting legislation of this kind. Especially difficult will be the cases which will arise in the mountain country of the South where par-

[15] *Hammer* v. *Dagenhart*, U.S. 62 L. ed.

ents are ignorant, illiterate, and careless. It is, however, better than no law at all.

Title XIII—General Administrative Provisions. This title is a miscellany of some twenty sections dealing with various phases of administering the law. One of the significant features is the establishment of two boards, a Legislative Drafting Service and an Advisory Tax Board. The former is to be under the direction of two draftsmen, one to be appointed by the President of the Senate, the other by the Speaker of the House of Representatives without reference to political affiliations. Its function is to aid in drafting public bills and resolutions.

The Advisory Tax Board is to be appointed by the Commissioner of Internal Revenue. The number of members is not specified in the law as it was passed, though the House provided for five. From the statement in the law, it looks as though this board would be the present Board of Reviewers under a new name, for their function is to adjust problems which arise in connection with the interpretation and administration of the income tax and war excess profits tax laws.

Title XIV—General Provisions. This is another section containing miscellaneous provisions and several "riders." For example, there is one for the payment of $60 to persons serving in the military or naval forces of the United States who have been discharged since November 11, 1918; another reducing on July 1, 1919, the postage rates on first-class mail matter to those in force October 2, 1917; and another for making the District of Columbia "bone dry." The Conferees struck out a clause which the Senate had inserted for abolishing the zone system of postage rates on second-class mail matter.

Another provision of importance properly belonging with these sections, though included in Title II, was one inserted by the Senate which imposed a tax of 100 per cent on all contributions over $500 made by a person or corporation to any national political campaign, not including expenditures made by candidates out of campaign funds lawfully contributed. Unfortunately it fell by the way in conference.

This amendment required every person who makes an income tax return to state each gift made for influencing an election at which are to be nominated or elected presidential electors or members of the House of Representatives or of the United States Senate. The treasurers or chairmen of all state and congressional

committees were to file returns within 30 days after the passage of the act and within 30 days after an election showing the amount of all gifts, from whom received, and the date received. The administrative machinery for "checking up" had been provided by the act of June, 1910, relative to the publicity of contributions for influencing elections at which members to Congress are elected. This tax should have lessened corruption and other undue influence in elections.

Summary

The most significant feature of the new revenue act is the place it gives the tax on income, including the tax on excess profits, which is merely an extension of the income tax. As mentioned in the introduction, this is the fourth in a series of great revenue measures enacted during the present administration. These four acts have provided for rapidly increasing yields and they exhibit a noteworthy evolution of income tax development, in fact, a striking revolution in federal taxation. Before the war our annual federal revenues and expenditures were less than a billion dollars.[18] Prior to the passage of the Revenue act of 1913, the first of the present administration, about half of the revenues came from taxes on imports, nearly a third from taxes on liquor, and most of the remainder from taxes on tobacco.

The act of 1913 introduced a small tax on incomes and reduced the high tariff which had been maintained by the Republican party with few exceptions ever since Civil War days. Each of the three important succeeding measures has left the tariff practically untouched, but has greatly increased the scope and yield of the income tax. The decline in imports of manufactured goods during the war has tended further to reduce the yield of the tariff; and, as soon as the recent prohibition measures become effective, what used to be the second largest source of federal revenue will be eliminated. The new law provides for a total yield seven times as great as pre-war revenues to be raised from sources other than those on imports and liquor, which together formerly furnished two thirds of the total. The income and excess profits taxes are expected to yield six times the total pre-war revenues and fifteen or sixteen times the anticipated receipts from the tariff and liquor taxes.

[18] If postal revenues and expenditures, which are about equal, are included, the pre-war total was just about a billion dollars.

TABLE 6.—CHIEF SOURCES OF FEDERAL REVENUES.[1]
(In millions of dollars)

Fiscal years	1913		1914		1915		1916		1917		1918	
Source of revenue	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Liquors	$230.2	31.7	$226.2	30.8	$223.9	32.1	$247.4	32.1	$279.4	24.2	$443.7	10.4
Tobacco	76.8	10.7	80.0	10.9	80.0	11.5	88.1	10.2	102.23	9.2	156.2	3.7
Income tax												
Individual			28.2	3.9	41.1	5.9	67.9	8.8	180.1	16.2	2838.9[4]	68.1
Corporation	35.0	4.9	32.5	4.3	39.2	5.6	56.9	7.5	179.5	16.1		
Miscellaneous[2] Internal revenue...	2.3	.3	13.2	1.9	31.4	4.5	52.3	7.0	69.1	6.5	255.8	6.3
Internal revenue..	344.4	47.6	380.1	51.8	415.6	59.6	512.7	65.6	809.4	72.2	3694.6	88.5
Tariff	318.9	44.4	292.3	39.7	209.8	30.1	213.2	27.4	226.0	20.3	182.8	4.4
Miscellaneous[3]	60.8	8.0	62.3	8.5	72.4	10.3	53.7	7.0	83.3	7.5	296.6	7.1
Total	724.1	100.0	734.7	100.0	697.9	100.0	779.6	100.0	1118.7	100.0	4174.0	100.0

[1] Compiled from the Reports of the Treasury and Reports of the Commissioner of Internal Revenue 1913 to 1918 inclusive (fiscal years).

[2] Includes taxes on oleomargarine, opium, stamp taxes, etc.

[3] Includes proceeds from sales of public lands.

[4] Includes excess profits taxes of $1,791,000,000. The detailed statistics showing distinction between taxes paid by individuals and by corporations have not yet been published.

The temporary "dry" measure goes into effect July 1, and will continue until after the army is demobilized. This means that it will overlap the date upon which the seventeenth amendment goes into effect, so that henceforth revenues from liquor will be scarcely worth considering. Taxes on tobacco will produce only one thirtieth of the total amount estimated to be raised by the new law. In all of this there has been a movement away from consumption taxes.

Another tendency has been to get more and more away from payment of the tax at the source and toward payment by the recipient of the income. The Revenue act of 1913 provided that those who paid rent, salaries, interest, and other sums should deduct the tax before paying amounts due. This provision did not work satisfactorily. It was unduly expensive and annoying and was repealed upon the recommendation of the Secretary of the Treasury, although England seems to feel that the success of her income tax has been due to its collection at the source. The Revenue acts of 1916 and 1917 substituted information-at-the-source in most cases, and, in the case of two taxes, the act of 1919 goes even farther. These are the taxes on (1) partnership profits and on (2) distributions of personal service corporations. These organizations do not pay any tax, but their profits are taxed to the recipients, as has been stated above. If some method could be devised for reaching the undistributed profits of every corporation, and if their dividends could be taxed as provided for in the case of a personal service corporation, it would eliminate much of the confusion and complexity which now surround the law and which must of necessity continue so long as corporations and individuals are taxed by different methods.

One of the characteristic features of this law as also of its predecessors is the provision for "commissioner made law." In the income tax section alone there are nineteen cases in which regulations are to be made by the Commissioner of Internal Revenue for dealing with special cases. For example, "the net income shall be computed . . . in accordance with the method of accounting regularly employed in keeping the books of such taxpayer; but if no such method of accounting has been so employed, or if the method employed does not clearly reflect the income, the computation shall be made upon such basis and in such manner as in the opinion of the Commissioner does clearly reflect the income." The greatest power given to him is in the section dealing with war excess profits,

where he may levy the taxes of a corporation by "the amount which bears the same ratio to the net income of the taxpayer (in excess of the specific exemption of $3,000) for the taxable year, as the average tax of representative corporations engaged in a like or similar trade or business bears to their average net income . . . for such year." This is to be done only in cases where it is impossible to determine the invested capital or where a taxpayer would be placed in a position of inequality because of the time or manner of organization. The difficulties attending all such cases are enormous and there are bound to be many such problems so long as taxes are based on anything so inherently complicated as invested capital.

Several improvements have been made in the new law, among them the provisions for the allowance of net losses, depletion, and shrinkage of inventories. The new luxury taxes, as well as the old ones, are entirely justifiable at this time. Riders in general are to be condemned, but most social reformers will make no great complaint against the tax on child labor and the provision to make the District of Columbia "bone dry." They would not have objected either if the Conferees had retained Senator Thomas' amendment to put a 100 per cent tax upon political campaign contributions in excess of $500.

On the whole, the law is an improvement over those of previous years, but it leaves too much to be raised by borrowing. Six billions is a huge sum to raise by taxes and will cause many heavy burdens, but excessive borrowing causes still heavier burdens. We agree with Mr. Kitchin and others that it was a mistake to provide for less than 8 billions by taxation even though the war is over. Our military preparations did not attain their maximum until the signing of the armistice and payments of the bills have reached their peak since that time. They have averaged 2 billions per month since the armistice was signed[17] and will probably exceed by a billion or two Secretary McAdoo's estimate of 18 billions for the fiscal year. Furthermore, expenditures for 1920 are likely to be heavy. So called "ordinary" expenditures will be reduced slowly and will never get back to their pre-war level; there will probably be many war contracts not entirely liquidated by June 30 of this year; a billion dollars will be required annually for interest on the war debt; the Secretary of the Treasury has recommended establishing a sinking fund for the gradual paying off

[17] This was written in February. Later months have averaged over a billion dollars each.

of the principal of the debt; he has also recommended further loans to former European allies so that they may not curtail too seriously our exports to them during the reconstruction period. Expenditures should be reduced as rapidly as they may be consistently with our obligations, but it does not seem probable that the requirements of 1920 can be met without the issue of bonds or certificates of indebtedness, or other forms of government securities. It is difficult to present convincing arguments why the necessity for future bond issues should not have been reduced by larger levies upon war profits. They are certainly the most legitimate source of war revenues. Many corporations had set aside adequate tax reserves out of such earnings in anticipation of the higher levies. And, besides, they can be collected now before they have been passed on to "innocent" parties more easily and equitably than at any future time.

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CONSIDERATION OF THE PROPOSAL TO STABILIZE THE UNIT OF MONEY

1. *Nature of the proposal to stabilize the dollar and sovereign, etc.* A monetary proposal, in some respects new and extraordinary, has been advanced recently by Professor Irving Fisher and advocated with great skill and dexterity. I shall endeavor to set out the essential features of this proposal and to analyze its soundness.

The consideration upon which it is founded may be stated as follows:

a) Essentially, price merely expresses the system of exchange relationships among commodities.

b) If, therefore, the unit of value is based upon the entire system of price relations, it will necessarily constitute an unchanging unit (excepting in so far as the usage quantitatively changes, old commodities disappear, and new ones come into being.)[1]

c) The adoption of any one commodity (*e.g.*, gold) is (said to be) disadvantageous, since the relation of this to the appropriate (weighted) mean of all the rest fluctuates considerably (a price index, if expressed in terms of a gold unit, will vary greatly).

d) There is no reason to believe that any particular commodity can occupy for any time an unchanging position in regard to the mean exchange-relation of the others.

e) It is desirable, therefore, to abandon any particular commodity as representing the unit of value (it is desirable to demonetize gold), and to substitute a "token" or "certificate" which represents a definite series of quantities of given commodities, constituting what may be called a "composite unit."

f) The relationship of this to gold, which metal is important in balancing exchange, is periodically determined by means of price indexes, which in the new system will vary only by small amounts (so it is presumed).

g) Since the period of adjustment can be made as small as we please (yearly, quarterly, monthly, weekly—presumably monthly as a practical question), the money unit is repeatedly restored to its normal position: consequently, although prices may fluctuate *inter se* as much as ever (in response to demand and supply), the mean purchasing efficiency of the new money unit will remain unchanged, or, to put it more strictly, its variations of mean purchasing power, owing to the periodical price index adjustments, are necessarily only small oscillations about a mean position.

h) Gold (or any other equally satisfactory commodity) may be retained as a medium in which considerable value can be stored in rela-

[1] Professor Fisher does not introduce this factor into the consideration, probably to avoid complicating the presentation of his subject.

tively small compass; but the quantity corresponding to the money unit will be declared officially from time to time.

i) In order to prevent financial manipulations, a charge for converting the money unit into gold should be made: the amount of this charge should correspond approximately to the fluctuations in the money unit represented by the variations in the price index (which it is presumed must always be very small).

This, I think, fully states the new theory. The unit of money is still to be called a "dollar" in America, a "sovereign" in Britain, etc. It will *not*, however, as heretofore, be a piece of gold of definite weight and fineness (a gold coin), but only a "note" or "certificate" guaranteed by the government to be valid, not *actually* for the items of the composite unit (definite quantities of a declared group of commodities), but for their equivalent according to price, and particularly (so it is implied) for gold according to its price, less a conversion charge (seigniorage).

2. *The system involves the demonetization of gold.* Here it may be remarked that the present system of gold coins would necessarily disappear, and instead thereof either gold masses would be stamped with their weight (and fineness, if a standard were not agreed upon), or for convenience a new system of *weight-coins* would be created. These would be so designed that any weight could be made up with them, as with the weights of a balance.

To think in terms of the new system, we must therefore abandon our present conception of metallic money and regard an intrinsically valueless token(a mere certificate or bit of printed paper) as the fundamental unit, this token or certificate, however, representing nominally a definite "composite unit" (that is, given quantities of actual commodities), but actually a varying quantity of one commodity, *viz.*, gold. A "dollar," a "sovereign," etc., in the new scheme is no longer so much gold, but a counter which is legal tender for varying quantities of any commodity, including gold, according to its price at the time, the price in the case of gold, however, being officially declared by stating how many grains or grammes of it a "dollar" or a "sovereign" will purchase; though even then subject to a sort of brassage or seigniorage allowance.

3. *Despite the general demonetization of gold, it is still to retain its unique position.* Let us now look into this matter somewhat closely. The intention to retain gold as a commodity for balancing exchanges is obvious: that is to say, where imports and exports, credits and required commodities cannot be brought into exact balance, gold must pass. The work of the cambist under the

proposed system will be considerably increased but we must let that pass as relatively of no moment. That the price of gold is fixed officially gives it a unique position. Thus the monetary function of gold will be altered nominally rather than really under the proposed scheme.

Upon careful reflection it will soon become self-evident that the scheme does not change in any way the essential relationship of gold and commodities generally, nor does it propose to do so. What it really does is:

a) It substitutes paper money for gold coins (demonetizes gold) and transfers the notion of "constancy of value" to the paper money.

b) It requires future payments to be made in terms of the paper money and therefore in varying proportions of any required commodity (including gold).

4. *In essence the scheme does not differ from that of Jevons.* In the respect indicated the scheme does not differ essentially from Jevons' proposal that account should be taken of the price index in future payments. If it be true, as Professor Fisher affirms, that "by increasing or decreasing the [gold] dollar's weight, we would be . . . providing against either a flood or a drain of money," and that "the plan would put a stop, once for all, to a terrible evil which for centuries has vexed the world, the evil of dislocating contracts and money understandings," it will also be true that exactly the same benefits will be obtained and exactly the same practical result will be achieved if, in order to determine what should be paid to discharge a debt, we multiply it by the ratio of the price index at the date of settlement to that at the time of purchase. Similarly in regard to the payments of wages, fixed salaries, repayments by a bank of deposit, and so on. Thus a wage of 100 shillings, agreed to when the price index was 1200, must become 125 shillings when it has gone up to 1500 (*i.e.*, 100s. $\times$ 1500 $\div$ 1200 $=$ 100s. $\times$ $1\frac{1}{4}$ $=$ 125s.). Similarly, disregarding any question of interest, if a bank receives a deposit of £1,000 when the price index is 1200, it must repay it by handing out £1,333 6s. 8d. when the price index at the date of repayment is 1600 (*i.e.*, £1,000 $\times$ 1600 $\div$ 1200 $=$ £1,000 $\times$ 1 1/3 $=$ £1,333 1/3). (The question of interest payable would, of course, be similarly dealt with.) Thus in the proposed scheme of Professor Fisher, £1,000 would be handed back in paper "certificates," but if paid back in gold it would—in the case supposed—be the

actual weight of 1,333 1/3 of the former "sovereigns," although only the weight of gold of 1,000 such "sovereigns" may have been received by the bank.

5. *The system involves the unique treatment of gold.* It is important to note that there is no apparent reason why gold should be in the unique position advocated unless it is still to fulfil its monetary function. It is not suggested, nor would it be practicable if it were suggested, that any other commodities should be similarly dealt with, though the terms ("involuntary theft," etc.), by which Professor Fisher describes the failure to return coin not of the same weight but of the same purchasing power, would equally apply to any commodity whatsoever. If a bank is to return a larger amount of gold when the price index has risen for what has been deposited, or a smaller amount when it has fallen, why should not the same apply to the temporary holders of wheat, cotton, iron, copper, frozen meat, etc.? If for any reason a farmer were to place 1,000 centals of wheat in the possession of a granary holder, on the understanding that for the free use of it 50 centals of wheat per annum was to be paid and that at the end of two years the whole was to be at the disposal of the depositor farmer; and if, on the two years maturing, a demand were made by the depositor that some 1,650 centals should be returned because wheat had fallen to only two thirds of the original price, the demand would be treated as preposterous; yet the principle sought to be enacted may be regarded as economically identical therewith.

Whenever the commodity that a particular person possesses happens relatively to fall in price he suffers the disadvantage thereof: he is not "cheated" nor is he "robbed."[2] Nor is Professor Fisher's "working girl" (who, having put 100 dollars in the savings bank in 1896, finds in 1918 that, although she has been given 200 dollars for the 100, she can after all purchase only what the 100 would have bought originally) "without the intention of anybody cheated out of all her interest." We may pass the connotative suggestions of the language used as of small moment, and note merely that the same thing virtually happens in every case where a person possesses a stock of commodities that fall in value, and the converse when he possesses commodities that rise in value (ethically all cases of unearned appreciation or depreciation of value are on the same footing).

6. *The real relation of gold to commodities generally not af-*

[2] See Professor Fisher's, *Stabilizing the Dollar in Purchasing-Power,* p. 9.

fected by the proposal. Suppose that we make our "composite unit" so large and representative that it may appropriately be regarded as a *standard,* and therefore, like any other standard, becomes of "fixed value." This means nothing more than that it is that by which we measure value: it is the unit of value (as so many grains or grammes of gold constitute the unit today), and therefore it counts as 1 in values, whatever the relative variations between the exchange relations of its component elements. Let it be supposed that one series of commodities, A, B, C, D, etc., in this composite unit has advanced in relation to another series therein, P, Q, R, S, etc. The possessors of A, B, C, D, etc., will be gainers, and P, Q, R, S, etc., losers, and there is no avoiding this, and "the injured party has no recourse."[3]

If it be financially practicable, which is possibly true, let us further suppose that *all future* contracts in regard to value are to be made in terms of the gold standard as it at present exists, subject, however, to revision of the amount according to price-index ratios; *exactly* the same result will be achieved as will eventuate by Professor Fisher's scheme (in which, by the way, the price of gold must be left out of account, since it is that which is ascertained by the price index based upon the series of other commodities).

7. *What causes the change of price in the present system?* Supply and demand, influenced and modified by a complex of trading manipulations, by the vagaries of fashion, and many other things, really determine the exchange relations of commodities, gold included, as the case stands at present. Whether the quantity theory is substantially true or is not true matters little. The total gold supplies at present are in excess of normal currency requirements though a world war has upset this for a limited period, thus necessitating the creation of temporarily inconvertible paper money. The fact observed is that on the whole there has been a world wide rise in prices *recently.* Doubtless, too much has been made of this, as is evident when we make a more extensive survey of the question.[4] If we combine all the results for wholesale prices and weight them by the populations as at the

[3] *Op. cit.,* p. 13. The representation of the existing economic system as equivalent to a person buying a box of socks and finding the socks had been taken out is not parallel. It is rather this, the box contains a varying number of socks.

[4] A belief that price indexes will perpetually rise is, in my opinion, without justification. Already there are signs of price indexes falling as they fell in the latter half of last century. A belief has arisen that gold supplies will fall short of requirements: if well founded, prices will certainly fall.

time, the following average quinquennial results are obtained, the year indicated being the middle year of the quinquennium: The

Year	1842	1847	1852	1857	1862	1867	1872	1877
Price index....	1067	1001	1004	1096	1205	1360	1249	1065
Year	1882	1887	1892	1897	1902	1907	1912	1916[5]
Price index....	1007	860	821	765	859	944	1021	1533[5]

high value for the price index in the quinquennium, 1865-1869, followed the Civil War of America. It is of course invalid to go back into far distant history for illustrations of the system of relations between gold and other commodities, because we are not able to ascertain accurately populations, the stocks of gold, the demand owing to the mechanism of financial operations, the standard of living, the difficulties or otherwise of winning gold. We must therefore base our views upon the data from the year 1840 onward when the price index was 1,162, the basic year being 1911 = 1,000. Up to the year 1916 the range of the price indexes was from 726 in 1896 to 1,513 in 1865 and 1,365 in 1916. We may say, therefore, that the range is about 0.75 to 1.50. There is every probability of a readjustment when events again become normal.

Apart from the effect of war, financial collapses, famine, etc., it is of course to be expected that the relationship of commodities to gold should rapidly change with improvements in the mechanism of exchange. The less gold is employed in this mechanism the greater will its depreciation tend to be, because its quantity will be in excess of requirements. There is nothing extraordinary in this, and the phenomenon hardly belongs to the arcana of finance.

8. *Danger of a money unit not representing a reality.* In the new system advocated the money unit becomes, if not a mere *nominis umbra*, at least a unit dissociated from the *reality of value*. A credit instrument, a note, a bond, is really a promise to pay, and is without intrinsic value. For this reason it must be safeguarded in some way, *viz.*, by the holding of at least a considerable proportion of what it represents; for example, gold, etc., in the case of our present money system. It would appear that it is not proposed to hold commodities as the reality against the "dollar-certificates," but gold of ever varying value.

Thus, as previously stated, the new "dollar," or the new "sovereign," will not be a definite quantity of a commodity (gold) of standard fineness, but *an intrinsically valueless thing*, valid for exchange, not into the composite unit which is the corresponding

[5] Means for three years only from an incomplete number of returns.

reality, but into some given amount of gold determined by its price, officially declared upon a basis of experience of the price of the commodities in the composite unit. But since the gold liberated is not likely to be used in the arts, quite a moderate proportion will serve the purpose in view, and as the metal is demonetized, "What," we may ask, "will operate to fix its price?" It will tend to become a commodity, the quantity of which will be greatly in excess over the demand. This *per se* will tend to lower its price as compared with commodities. Professor Fisher's remedy (virtually the demonetization of gold, or at least its elimination from usage as ordinary currency) will accelerate the rapidity of its fall in value: in other words, it will tend to enhance the prices of commodities in relation to gold, though in his scheme the fact is masked by the introduction of an intermediary—the paper dollar —which will appear to be constant. The reality of its depreciation will be evidenced by one thing only, *viz.*, that as time goes on, the paper dollar will buy more and more gold in proportion as the currency usage of gold is diminished. This may of course be corrected by the supply falling off, as it may not be profitable to win gold in such circumstances.

9. *Inflations of currency steadied only by storing commodity of value.* The large issues of paper currency, alleged to be convertible, but really inconvertible (at least temporarily), have already been followed by inflations of price. These inflations will quickly be corrected as soon as the paper becomes really convertible. The possession, by the issuer of paper money, of the commodity (gold) which ensures convertibility is the corrective that operates against the perpetual advance of prices from continued inflation: the necessity of possessing the gold limits the issue of the paper.

The unlimited issue of valueless paper which can be made legal tender, and is not even interest bearing, brings in its train the mischief with which it is uniformly associated. The large issue of paper money has been tried frequently, perhaps the most notable instance being the issue of the French "assignats." The new scheme does not propose that governments issuing the paper should store either the composite unit or gold as a check on overissue, and it is the leaving of this out of sight which lends plausibility to the scheme. The Gresham law will operate and the gold pass out—more and more cheaply—to those peoples who do not espouse the scheme or endorse it practically. *The necessity of storing a reasonable proportion of the thing of value (i.e., gold)*

represented by the paper is the safeguard which the new scheme does not sufficiently take into account.

10. *Gold as a safeguard.* But here perhaps the rejoinder may be made that it *is* proposed to retain gold stocks and to make the paper money convertible. The gold dollar of 25.8 grains of gold, nine tenths fine, will have disappeared. Definite weights of gold will be paid out against paper dollars. Initially the paper dollar will buy a little less than 25.8 grains of gold. As paper issues increase, a paper unit will tend to purchase less and less gold (a result in accord with the quantity theory of money) unless this is modified by a collateral demand for gold and a corresponding restriction of paper money to the minimum of currency requirements. There would, as previously stated, be no necessity to make gold coins: gold masses (bricks) of specified fineness and weight, duly stamped by the mints, would take their place.

It is interesting to note that in this development (?) we should be virtually going back to the days of the Chinese gold cubes, for these gold masses would be exchanged for the dollar certificates in one country and sovereign certificates in another according to their latest declared gold purchasing power.

11. *Gold being excluded in the determination of a price index really remains the standard.* It is true of course that the scheme will tend to stabilize the value of the dollar certificate in ordinary circumstances, *provided* gold be left out of account in the list of commodities embraced in the evaluation of the price index. Of course, were it included with a proper weighting, *it would balance the price index, since the quantity of gold is made to fall in the same ratio that the price index rises.* Thus this metal is in a somewhat peculiar position. It is still to be regarded on the one hand as a mere commodity, for variable quantities will be purchasable according to its declared price by means of paper certificates, each of which represents a given composite group of commodities other than gold. Notwithstanding this, the whole system of exchange relations between gold and all other commodities remains unaffected, excepting in so far as demonetization diminishes the quantity of gold required as currency.

Exchange relations between commodities are not changed by the mere adoption of any one or of any group of them as a basis of reference. That this is so can be visualized by a very simple

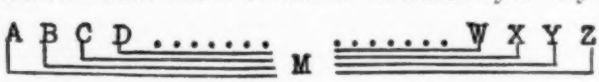

diagram in which the lines denote the exchange relation of each to M, thus any one commodity (A, B, C, D, etc., or W, X, Y, Z, etc.) could take the place of M in the diagram (say, either 1 bushel of wheat, or a complex group made up in any definite way whatsoever, instead of so many grains of gold), and the scheme of relations would be absolutely unchanged. All that is changed is the mere numbers expressing the relations themselves: the numbers would differ, not the relative facts. So far as the exchange relations are concerned, the new proposal is essentially only a manipulation of figures, not a change of the reality. Parenthetically, it may be remarked here that it will not stabilize the purchasing-power of the dollar in all circumstances, as we shall later see.

12. *The stabilizing function of the composite unit.* If the new scheme does not contain some hidden surprises (which is quite possible) and does not lend itself to injurious financial manipulations (which is also possible), it is of course true that it might serve the purpose of providing a unit of (relatively) constant value in ordinary times for those whose purchasing requirements happen to coincide with it both qualitatively and quantitatively. That is to say, any person whose purchase requirements happen to be the same proportion as regards commodities and their amounts as in the composite unit, would have a paper money unit of approximately fixed value (so long as he did not want to purchase gold). It would therefore automatically, subject to the indicated limitations, adjust payments so that they would have in this particular case a constant purchasing efficiency. The uniform purchasing power in this sense is maintained by varying the relation of the certificate to the real standard, *viz.*, gold. But obviously it is not true that it is uniform for all classes of purchases and purposes. For one set of purchases it would be disadvantageous and for another advantageous. It is only *on the whole* and for the "*average purchaser*" (in the sense of "l'homme moyen") that it is of uniform value. In individual cases it is non-uniform, and for the purchase of gold is as variable as the price index is in the present system.

13. *The application of price indexes to determine equivalent payments similarly stabilizes purchasing power.* What Professor Fisher calls the "unjust transfer of property," the "cheating of savings and bond holders," the "suffering of salaried classes," and also of the wage-earning classes wherever wages are not equated by means of price-indexes, may all be remedied by determining that salaries, etc., and contract payments shall always be

subject to correction by means of the ratio of price indexes at the time of the initial agreement and the time of payment. (In Australia minimum wages are equated from time to time in this way, but not automatically.) As already shown, it does this exactly as the "paper certificate" does, and is effected in a perfectly definite way, which is quite intelligible. The creation of a dollar certificate of varying value as regards the standard metal (gold), of varying value as regards any individual commodity, and of (approximately) fixed value only as regards the purchase of the composite unit or any multiple thereof, has after all nothing like the virtues that it appears to have when we restrict our imagination to purchasers engaged in buying the composite unit or its approximate equivalent. From this point of view alone it is seen that the abandonment of the precious metal (gold) as the standard of value is at least of very doubtful wisdom.

The reason why gold has held its position as a standard of payment from time immemorial is that in respect of physical properties and relative value it is uniquely fitted to serve as a standard, and the question of changing values can be as conveniently and intelligently met by applying price-index ratios as by using a paper dollar of varying gold values. It seems almost to have been overlooked in Professor Fisher's article that gold in currency, and the gold reservoir to meet unanticipated financial situations, constitute together a stabilizer of eminent services; and also that the adoption of a single commodity of high value, great permanence, easily handled, and incorruptible, has been of enormous advantage to mankind.

14. *Conclusion.* In closing his article Professor Fisher says: "Our shifting dollar is responsible for colossal social wrongs. It is the great pick-pocket, robbing first one set of people, and then another, to the tune of billions of dollars a year, confounding business calculations and convulsing trade, stirring up discontent, fanning the flames of class hatred, perverting politics." These evils are to be annihilated by securing "a true standard for contracts, a stabilized dollar."

We have pointed out that the whole system of exchange relations is not really altered by making the "dollar" the name for the value of a composite unit instead of the name of a definite weight of standard gold. So far as it is possible to attain it, the result at which Professor Fisher aims can be secured by making wages, salaries, or any contracts as to payment that we please vary as the price indexes vary. By so doing we see clearly the

mechanism of our operations, and this is not a disadvantage but an advantage. We are not working blindly but intelligently. The simplicity of the system of comparing the exchange values of all other things with a unique standard—gold—is not jettisoned but retained. We can decide which payments shall be made subject to price-index variations and which shall not, for they are probably not all equally entitled to this alleviation, or loading, as the case may be; and, further, the scheme cannot and should not be indiscriminately applied.

Finally, there is an error in the assumption that a stabilized money unit is really a possibility, which error can be made manifest by the following considerations. Suppose that on an isolated continent all transactions were carried on by a paper currency guaranteed to be valid by its government, the unit representing the value of a definite composite of commodities. Drought occurs and crops fail, producing a serious shortage of some of these. Obviously the whole system of exchange relations will then have to be changed, and those who have most paper dollars will be prepared to sacrifice them to meet their needs; that is, the commodity value of the paper dollar will have fallen in spite of the stabilizing process. The situation would be the same if the currency were gold. With a paper currency there would also be greater risk of failure to reëstablish a normal situation, because it is intrinsically worthless. We are safer with the system of a noble metal basis, and all difficulties which arise from general changes between the unit of value and commodities can be met by special or general provisions determining the proper payment by means of price indexes. It will be a service of value if we can eliminate from popular opinion the notion that money payments for goods or for services can be mechanically made or adjusted so as to be perpetually satisfactory. Whenever Nature's bounties are variable in quantity or fail, and whenever the population is in excess of supplies, the ordinary dollar will fail and the "stabilized" paper dollar will fail also. No manipulations dependent upon price indexes can serve us, and not even contracts can secure us. The attempt to create a unit of value which shall be constant is really chimerical, and experience would soon reveal that. I am of opinion that if a real crisis came through world shortages, the holders of the paper dollars would have reason to deplore the new system.

In closing I desire, however, to express my sense of indebtedness to Professor Fisher for so ably raising this question. While

I do not think his conclusion is correct, *viz.*, that it is desirable to create a "certificated unit of money," his discussion of the question is illuminating, and brings again into strong relief a point of view argued long ago by Jevons, a point of view which has commended itself to the arbitration courts of Australia in regard to wages at least, but which probably requires considerable qualification. It is of great advantage that, from time to time, our economic usages, however long sanctioned, should be reviewed by capable minds of great originality and clear insight, and that we should be forced to readjust our point of view and see the truth with a wider outlook. I hope later to show explicitly that there is a very real limit which prevents the automatic adjustment of the payments for services (salaries and wages, etc.) so that they shall perpetually have the same commodity-purchasing power; and to show also that no unit of money, metallic or paper, can possess this power, even if it were legally declared that it shall have it. The idea that we can have a stable unit of money leaves out of sight that the bounty of Nature varies, that man's industrial activities do not exactly coincide with human requirements, that the vagaries of taste disturb his wants, and that the standard of his desires perpetually alters. A unit of *value* cannot appropriately be compared—as Professor Fisher compares it—with a physical standard:[6] for on its subjective side, which comes specially into play in all crises (shortage, famine, etc.) the constancy of relation to commodities cannot be assured. In times of famine people would be willing to give two, three, or more stabilized dollars for the group of commodities which each dollar "represented." It is these facts that make the hope of creating a stabilized unit of anything chimerical, and which show that merely mechanical manipulations of prices and values cannot remedy a difficulty which is real and in the nature of things.

G. H. Knibbs.

Melbourne, Australia.

[6] *Op. cit.*, p. 13. In the case of some physical standards (*e.g.*, length, weight, etc.) its nature is that of an example in kind: for instance, the distance between two points, a mass of gold or platinum. In the case of others the unit is measured by some consequence of its presence: *e.g.*, in the case of heat by linear, area or volumetric changes. Exchange-value depends upon the attitude of the mind: that is, ultimately it is esteem-value. Thus in a shortage of food commodities, the esteem-value would rise, and although the certified "stabilized dollar" was to represent given quantities, famine would so raise the esteem-value of food that persons would—in extreme cases—pay any number of "stabilized dollars" to preserve health or even life itself.

REJOINDER BY PROFESSOR FISHER

Dr. Knibbs's criticisms of the plan which has been proposed by myself and many others[1] for stabilizing monetary units are interesting and able, but, for the most part, traverse ground which has already been covered.[2]

His chief criticism seems to be that we can correct the aberrations of our gold standard by special clauses in contracts providing for adjustment by means of an index number and that this extraneous adjustment would obviate the need of any change in our monetary system.

To prove that an adjustment by means of an index number is feasible Dr. Knibbs cites the fact that such adjustments have been made in Australia in relation to wages. I hasten to say that, in the absence of stabilization, I am ready to go quite as far as Dr. Knibbs in favoring such wage adjustments.

Australia is not alone in adopting this principle. A noteworthy result of the recent war is the increased interest in this country also in the measurement of price levels by means of index numbers and the practical utilization of these index numbers in making equitable adjustments in the payment of wages. Strikes have occasionally been settled by wage increases proportionate to the increased cost of living. In Oregon and Washington the minimum wage was revised on the same basis. The War Labor Board and the Shipping Board have in many instances used index numbers in determining wage scales. In some cases, these boards arranged for periodic readjustments. Several firms have provided high cost of living pay envelopes, supplementing the base wages by a percentage varying with the index number. These firms have not only safeguarded themselves against labor discontent in the present while prices are high but have made the way easier for future wage decreases if prices fall. The Bankers Trust Company in

1 It should be emphasized that practically the same plan had been worked out independently by several besides myself. This was done in considerable detail by Aneurin Williams, M.P., Professor (now Dean) J. Allen Smith of the University of Washington, D. J. Tinnes of Hunter, N. D., and Henry Heaton of Atlantic, Iowa; and in a general way by Simon Newcomb, Alfred Russell Wallace, Professor Alfred Marshall, William C. Foster of Watertown, Mass., and others.

2 See "Objections to a Compensated Dollar Answered," AMERICAN ECONOMIC REVIEW, vol. IV, no. 4 (Dec., 1914).

New York went to immense trouble and expense to calculate the changes in the cost of living to its clerks, appointing a special investigating committee which drew up a report of twenty-two pages.

But Dr. Knibbs, after discussing the feasibility of such special extraneous adjustments, goes on to say that, after all, such adjustments are not necessary.

Now, if such adjustments are not called for, why, it may be asked, have they been made in Australia, the United States, and other countries? To my mind there lies a world of significance in the fact that index numbers are being used to correct the aberrations of units of purchasing power. No possible explanation for so wide an adoption of this corrective, in spite of its clumsiness, has been or, I venture to believe, can be made except that the purchasing power of the dollar, the shilling, etc., acutely needs such correction!

But Dr. Knibbs maintains that gold is already sufficiently stabilized by the fact that there exists a large reservoir of it. In support of this supposed stability he gives no evidence whatever, but relies entirely on a priori assumption.

The simple fact is that gold, and our currency in general, is *not* stable! Actual statistical tests of the value of the dollar in terms of commodities in general, as shown by the index number, prove that even before the war gold was only about as stable as eggs and not as stable as carpets!

Thus we find Dr. Knibbs asserting that our currency does not need stabilization after admitting that an extraneous adjustment may be desirable and is practicable. Would it not be more logical if he had cited the Australian experience, which he used in support of an extraneous adjustment, to prove that we *do* need stabilization?

Moreover, an extraneous adjustment is *not* practicable as compared with the plan which Dr. Knibbs opposes. He says "*Exactly* the same result will be achieved [by index number adjustments in contracts] as will eventuate by Professor Fisher's scheme [for incorporating the index number in the monetary unit itself]." While, theoretically, it is possible by means of index numbers to adjust wage contracts, loan contracts, etc., yet from a practical point of view it presents extraordinary difficulties. *Theoretically* we might have an elastic yardstick, say the height of a barometer, changing from day to day. All that would be necessary for the

salesman selling cloth would be to have the weather bureau supply him daily with a simple multiplier, such as .823 on one day and .798 the next, by which, after measuring out his cloth on the barometer, he should make the needed adjustment! It is only a matter of arithmetic and to adapt Dr. Knibbs's words, "*exactly* the same result will be achieved"!

Practically, of course, one might almost as well expect an individual Englishman to adopt a decimal system and transact his business in dollars and cents while everyone else is talking in terms of pounds, shillings, and pence as to depend on an arithmetical factor for correcting either yards or dollars. Daylight saving was brought about by a shift of the clock applying to the whole country, although *theoretically* all that was necessary was for each individual to get up an hour earlier and make his day's program on that basis! Practically, Dr. Knibbs could not hope to see an extraneous method in general use for years and, until it is in general use, special inconveniences will be suffered by any firms which employ it.

A number of practical difficulties with such extraneous corrections are given in my *Purchasing Power of Money*.[3] They involve the annoyance of special contracts and special calculations. If one side of the ledger is stabilized and not the other, the profits are really destabilized.

It is clear that such a plan can be only a makeshift for extreme cases and can never be made universal. We must seek some more convenient method of applying the correction, one which will dispense with the need for each individual to make calculations. This is accomplished in the plan of stabilizing the dollar; for it incorporates, as it were, the index number in the monetary unit itself.

It is surprising to find Dr. Knibbs here also reversing the true argument. He complains of the plan to stabilize the dollar because of the trouble it would make to the "cambist"! Why did he not cite the fact, a million times as important, that the use of index numbers as an extraneous corrective to contracts would involve troublesome calculations, not to a negligible fraction of mankind but almost universally? The cambist is not only an infinitesimal fraction of one per cent of the population but a professional calculator; and as his work involves varying factors in any case, the introduction of a new variation would be of little trouble to

[3] Chapter XIII, § 4.

him even if his troubles were a matter of national concern. Moreover, the system would not even introduce such cambist calculations, if adopted internationally.

Dr. Knibbs again uses a double-edged argument when he finds fault with the proposed system for stabilizing the dollar because it would not meet the needs of varying classes which properly require different kinds of index numbers of different "weighting." Why does he complain of the stabilization plan on the ground that it does not work out its corrections to a sufficiently fine point, if his claim is true that instability of the gold standard is so trifling as not to need any correction at all!

Here again Dr. Knibbs gives no evidence as to his contention that different index numbers would seriously be needed for different classes. The truth is that actual facts contradict such an assertion as flatly as they contradict the assertion that no index number is needed at all and as flatly as the two assertions contradict each other. One of the striking points about index numbers is that usually they move in general sympathy, whatever the system of weighing, whatever the number of commodities, whatever the list of commodities, whatever the classes of the community to which they especially apply. And the divergences which we find under our present system of a variable dollar would be even less if the dollar were stabilized. For instance, retail prices now lag behind wholesale prices simply because wholesale prices are allowed to move so fast. Whenever the price level remains even approximately unchanged the large discrepancies between the movements of wholesale and retail prices disappear. If the level of wholesale prices were not allowed to move at all, the level of retail prices would also be stable.

Dr. Knibbs's second criticism deals with the question of securing greater justice. Dr. Knibbs takes exception to my use of the words "cheated" and "rob" as applied to the pranks played upon debtors and creditors by our present standard, or lack of standard, and gravely points out that when a contract is made it must be kept! I have often expressly stated that, under our present system, an individual harmed by the appreciation or depreciation of money has no grievance against some other individual. The problem is not one of *individual* justice but of *social* justice. The concept of *social* justice, as distinct from *individual* justice, is becoming year by year more distinct and important. For instance, the time has gone by when we coldly tell the workman who is in-

jured on a railway that he submitted himself to such a risk when he took employment and therefore has no grievance against anybody. Instead we provide some sort of social insurance. It is quite true that, under our present system, every user of money is a speculator in the value of gold and must take the consequences; and, as long as society has its present system, the individual is bound by its rules. It is not the behavior of the individual but the system itself which should be changed.

Dr. Knibbs says, "Why should we not apply the same principle to any commodity besides gold, say to wheat, cotton, iron, copper, frozen meat, etc., and indemnify the loser from a change in price?" The present system by which the meat dealer takes the risk of the price of meat, the wheat dealer that of the price of wheat, etc., puts the risk, which must be borne somewhere, where it can be borne best, in the hands of professionals.

If, however, meat were made the *standard of value*, all of us would become speculators in meat *without* the means which are open to the meat merchant of knowing what the changes of value from time to time are likely to be. The objection to our present system is not that a few specialists in gold have to suffer loss but that gold is made a yardstick for all contracts.

Dr. Knibbs's remaining criticisms can be dealt with more briefly. In one respect he has misunderstood the plan. He seems to think that it is equivalent to almost the complete demonetization of gold and that the value of gold (when discarded as money) would be reduced on that account. Incidentally I may point out that whether its value would be reduced or not the system of stabilization would operate to keep the value of a *dollar* stable. But as a matter of fact gold value would not be substantially affected. It must be remembered that today almost universally the monetary use of gold is only that of reserve, precisely what it would be under the proposed scheme.

In the same connection Dr. Knibbs seems to think that there is some hitch in regard to the connection between the paper certificates and the gold reserve. He says:

> The new scheme does not propose that governments issuing the paper should store either the composite unit or gold as a check on over-issue, and it is the leaving of this out of sight which lends plausibility to the scheme. . . . *The necessity of storing a reasonable proportion of the thing of value, that is gold, represented by the paper, is a safeguard which the new scheme does not sufficiently take into account.*

Dr. Knibbs is mistaken. It most certainly *is* proposed to retain "gold stock" and to make the paper money convertible. The processes by which gold adds to or subtracts from the currency will be substantially the same as at present. The only essential change is that the price of gold given by the government to the miner and importer and asked of the jeweller and exporter will no longer be the arbitrarily fixed $20.67 an ounce but will vary according to what gold is really worth as shown by means of the index number from time to time. Redemption would, of course, occur just as at present and provision would be made for the reserve to keep the due ratio to the certificates outstanding. In my forthcoming book on *Stabilizing the Dollar* this point is elaborated in a special appendix on The Gold Reserve.

Dr. Knibbs conjures up hypothetical cases such as universal world famine, world drought, world shortages, under which circumstances he prophesies that the plan would do more harm than good.

Here again Dr. Knibbs reverses the true argument. Why should he cite the almost infinitely improbable case of a world scarcity or superabundance of things in general and pay no heed to the extremely probable, in fact often realized, case of scarcity or superabundance of gold in particular? Instead of supposing improbable simultaneous shortage throughout the world of a hundred commodities why not suppose that the alluvial gold at the mouth of the Sacramento River should prove to be recoverable at a profit and should prove to amount to many billions of gold, both of which propositions have been reported to be true?

The only time when we have had something approaching a world scarcity has been during this recent war and yet it has been just at this time that we have, in wage payments, adopted the corrective for monetary units which Dr. Knibbs himself mentions with approval. If these high war prices represented not superabundance of money but simply scarcity of goods it might well be argued that no such correction was called for.

I make bold to say that if so able a critic as Dr. Knibbs can not find more serious defects in the plan than he shows in his article we may rest assured that the plan will survive the attacks upon it. Dr. Knibbs himself admits the main point when he says: "It is true, of course, that the scheme will tend to stabilize the value of the dollar certificate in ordinary circumstances." He simply denies the need.

It is no reflection on Dr. Knibbs to say that, while he may be quite unconscious of the fact, in my opinion his objections, like those of the great mass of objectors, are emotional, not intellectual. He would defend the existing system against an unwelcome attack. He fears to see it changed. "We are safer with a system of a noble metal basis," he says. In the bottom of his mind, I venture to infer, there is just one objection to the new system and that is that it is new.

Now that we have and are actually using the index number as a corrective of our monetary units, they stand convicted and will become increasingly discredited until in some way the needed correction is applied more generally. Possibly some better way out than that which I have suggested may be found. The substitute mentioned by Dr. Knibbs of an extraneous correction can and will be applied sporadically and so will serve a good purpose as a stepping stone to something more general. That some day such a means of releasing us from the present instability of monetary standards will be desired and attained seems to me manifest destiny.

Irving Fisher.

Yale University.

AN AMERICAN STANDARD OF VALUE

THE MARKET GAGE DOLLAR

The Market Gage plan, which has been presented in this REVIEW,[1] assumes:

That, in purchasing power, all money and credits used as media of exchange vary directly with changes in the gold weight of the dollar of redemption for which they, in effect, are demand due-bills; and that the general price level varies *inversely* with the purchasing power of such money and credits. The term credits as here used covers all credits used as media of exchange, including book entries and all written and oral and even tacit agreements to pay in money or in goods priced in money.

That, therefore, to increase the gold weight of the dollar will increase the purchasing power of all media of exchange reckoned in dollars and thereby lower the price level; and to lessen the gold in the dollar will lower their purchasing power and raise the price level.

That the per cent of change in the general price level may be found each day by comparing the day's wholesale prices of all commodities with those of the preceding day.

That, these assumptions being sound, price level stability may be maintained by correcting each aberration as it appears, thus preventing cumulative change.

Its author cannot agree with Professor Irving Fisher that in the construction of the index number a selected list should be used "which should exclude the sluggish commodities in order to be more promptly responsive to price changes." In using such a partial list and excluding from it the "sluggish and price-fixed commodities," and basing his proposed index number on the active and flighty commodity prices, Professor Fisher would be cutting loose from the true all-commodity value level. This would allow his price level to be dragged downward by the pull of those commodities which by discoveries or by cheapened production are being permanently lowered in price, or to be pushed upward by commodities permanently enhanced in price by scarcity. And, his index number not being a gage of the all-commodity price level, he would have no means of knowing how far he would have departed from his original level. As the dollar must be a true measure of value for all things, all things must enter into its schedule.

The first draft of this plan called for weekly regulation of the redemption rate. The reason for the prompt shift to daily ad-

[1] AMERICAN ECONOMIC REVIEW, vol. 8 (Sept., 1918), p. 579.

justments was the obvious one, that, otherwise, the dollar would be off center most of the time and correction when it came would often cause a jolt. All objections to adjusting but once a week apply with greater force to monthly or quarterly regulation. Infrequent adjustments would impair the worth of the new dollar for statistical uses and as a standard of deferred payments. Any change in the weight of the bullion dollar should, except for a slight lag for which compensation is here provided, produce a reciprocal result, but such a result is by no means necessary to the full success of the plan. To the extent that it fails to fully correct the price level aberration, that aberration, unless in the meantime offset by a contrary market trend, appears in the Market Gage for the following day and causes further adjustment. (See Market Gage schedule on page 265.)

Things salable but not properly quotable on the market are not, as such, included in our schedule. Of these, labor and professional and personal services have hitherto, roughly speaking, risen and fallen with general prices and they should be generally steadied by a steady market level, though rising individually with increase of efficiency and rising as a whole as production, in proportion to a given expenditure of human effort, increases. A steady commodity market will steady wages by supplying simpler data for deciding what is just and right between employer and employee. But the wage level should not be tied fast to the commodity price level, for this would bar the worker from participation in the benefits of cheapened costs of production. The writer has elsewhere worked out a Wage Mean schedule in which wages in the various occupations are listed as commodities are in this schedule. Fluctuations of the Wage Mean signal changes in the national average of wages while fluctuations in the Occupation Index column (corresponding to PQ) show relative wage changes.

J. S. Mill taught that no standard can measure the value "of the same thing at different *times* and *places*." Comparisons of commodity price averages have given us since his time a means of comparing the value "of the same thing at different *times*," in the same market; but no standard that will correctly gage the value of the same thing in different *places*, even at the same time, is yet in sight. Has gold itself ever been, at any one time, of the same all-commodity purchasing power in all countries? Gold, through its proxies, will still be the common vehicle of value. Will occasional change in the weight of gold given a certain name equalize

the exchange value of gold the world over? An international index number with a money unit based thereon would "correct" the net average of price level aberrations the world over, yet its unit would be truly stable nowhere. With so unwieldy a schedule daily regulation would be impossible, yet how else than by daily adjustments of the unit could price level changes due, say, to temporary local credit inflations or contractions, be corrected? Neighboring countries with common free markets may have a common standard, but in widely separate markets the same value can seldom be indicated by the same weight of gold.

International agreement to stabilize separately the various money units is desirable but by no means indispensable. The adoption of an American standard of value would be of immediate benefit and should soon lead to stabilization in other countries.

D. J. TINNES.

Hunter, North Dakota.

MARKET GAGE SCHEDULE[1]
Dollar = 1.6718 grams-d'or (25.8 grains gold)

No.	T	W			Q	P	PQ	PQW
1	80	.002	Gold	U.S. Mint/gram	1.6718	.598	1.	.002
2	400	.010	Copper	Ingot/NY/cwt.	.0400	25.00	1.	.010
3	1,000	.025	Iron-stl.	I.bar/Pbg/ton	.0500	20.00	1.	.025
4	760	.019	Coal	Bitu/Cinc/ton	.3125	3.20	1.	.019
5	800	.020	Corn	No.3/Chi/cwt.	.9091	1.10	1.	.020
6	1,600	.040	Wheat	1 Nor/Mps/cwt.	.4000	2.50	1.	.040
7	1,400	.035	Cotton	Middlg/NO/cwt.	.0625	16.00	1.	.035
8	1,600	.040	Sugar	Granul/NY/cwt.	.1300	7.69	1.	.040
9	1,200	.030	Cattle	Steers/Chi/cwt.	.1000	10.00	1.	.030
	(31,160	.779	All other commodities					.779)
	40,000	1.00	Market Gage at opening, first day 1.00					

[1] All goods on the wholesale market must be listed, the major items separately, the minor items in groups. A few series are here shown; all others being lumped together in one line to make up the 40 billions (assumed) annual trade.

DAILY ADJUSTMENTS[1]

Close of first day				Second day		Third day		Fourth day	
No.	QW	P	PQW	P	PQW	P	PQW	P	PQW
1	.003344	.598	.0020	.598	.0020	.598	.0020	.598	.0020
2	.00040	24.75	.0099	24.75	.0099	24.50	.0098	24.75	.0099
3	.00125	20.00	.0250	19.60	.0245	19.60	.0245	20.00	.0250
4	.00594	3.00	.0178	3.00	.0178	3.00	.0178	3.00	.0178
5	.01818	1.20	.0218	1.20	.0218	1.21	.0220	1.20	.0218
6	.01600	2.70	.0432	2.60	.0416	2.62	.0419	2.60	.0416
7	.00219	16.00	.0350	16.00	.0350	15.80	.0346	15.80	.0346
8	.00520	7.75	.0403	7.69	.0400	7.60	.0395	7.75	.0403
9	.00300	9.50	.0285	9.40	.0282	9.40	.0282	9.50	.0285
	(All others....		.7768		.7791		.7795		.7787)
	Market Gage..		1.0003		.9999		.9998*		1.0002
	Grams-d'or		1.6723		1.6721		1.6717		1.6720

[1] The redemption rate (the dollar equivalent in grams-d'or) multiplied by the M.G. for the day gives the rate for the following day. The M.G. for a certain day (*) having shown the same price trend as that for the preceding day, a trial allowance for lag—in this case 10 per cent of the day's aberration—is made in figuring the new rate.

EXPLANATION BY COLUMNS

T— Trade. The total volume—in millions of dollars—of the annual wholesale trade in each commodity.

W— Weighting. The relative market importance of each stated in decimals.

Q— Quantity. The initial commodity equivalent of the dollar, in decimals of the unit named.

P— Price. Current market price of quantity named.

PQ— P times Q, the commodity index, which at the beginning is 1 in each line. Net change in price of each commodity since the construction of the schedule may be shown daily by this index.

PQW— M.G. component, PQ times W. The footing of this column is the Market Gage.

QW— Q times W, the initial dollar equivalent, weighted, carried forward daily to facilitate figuring. QW times P = PQW.

The entire schedule should be revised yearly or as often as the necessary trade data for column T can be obtained.

After the average daily lag in market level adjustment shall have been determined, a compensatory allowance for such lag should be made whenever a market trend shall persist for two or more consecutive days.

AGRICULTURE IN EARLY LATIUM

The Roman Compagna, today the most desolate plain of Italy, once nourished the masses that subdued Italy and through Italy the Mediterranean basin. Livy has left us only fragments of oral traditions, already centuries old in his day, to explain how that narrow region could beget such overwhelming power. That the tradition known to Livy truly represented the essential conditions we are now learning from every science that can be brought to elucidate the prehistoric problems. The geologists have finally succeeded after a century of indefatigable work in charting the processes that shaped the Latin plain, the archaeologists can now with a fair degree of satisfaction sketch the history of the peoples who took possession when the volcanoes subsided enough to permit men to dwell in Latium, and the new agricultural experimental stations are analyzing and demonstrating the peculiar properties of its soil. All are providing scraps of knowledge that will enrich the footnotes of future editions of Livy's first book.

The Latin plain in its present conformity is very recent, so recent that the last masses of volcanic ash probably post-date the pyramids of Egypt. The process of formation continued from long before the glacial periods and all through them.[1] More than fifty craters, from which the ash and lava poured, can still be found within twenty-five miles of the imperial city. Long periods of tranquility intervened when jungles grew up over the temporary surface, only to be buried under a new mass of ashes. The deep cuttings of the railways that run out of the eastern gates of Rome expose repeated layers of black and yellow soil lying between thick strata of tufa and ash; they mark the jungles of former intervals of rest. The present surface is not old. The present mouth of the Tiber has apparently silted in as much alluvium since Ostia lay upon the seashore in Sulla's day as the river carried down between the last great eruptions and Ostia's foundation. Though the Sabine hills immediately behind this plain show numerous sites[2] of habitation several millennia old—some being the homes of savages of the palaeolithic age—and though there are traces throughout the peninsula of the earliest Indo-European peoples of the terramara[3] civilization (the men who in the third millennium introduced

1 A. Verri, *Origine e Trasformazioni della Campagna di Roma* (1911).

2 G. Pinza, Monumenti Antichi, vol. XV. This volume covers the whole of modern Lazio, which is more than twice the area of primitive Latium.

3 Peet, *The Stone and Bronze Ages in Italy.*

the use of copper), the oldest graves of the Forum, the Palatine, and of Grottaferrata cannot with certainty be placed earlier than the iron age, perhaps not more than a thousand years before Cicero. Archaeologists have doubted the accuracy of the reports[4] published by the excavators who a century ago claimed that the burial urns uncovered below Castel Gandolfo were found under undisturbed layers of volcanic ash, but Pinza has called attention to the traditions of the Romans that in the early days of Rome ashes frequently fell upon the Alban Hills, and his own theory that Alba Longa was buried in the debris of an Alban eruption does not entirely lack plausibility.

The Latin plain is then of very recent date, and human cultivation of it of still more recent. It is well known that the volcanic ash that falls from Vesuvius is rich in phosphates and potash and that a moderate admixture of it in the soil acts as an excellent fertilizer. In fact, the Campanian farmer is not averse to an occasional eruption if only the volcano behaves with moderation. The later ash-strata of the Alban volcanoes had an abundance of these same constituents, though a large percentage of the original elements has leached out with time. Needless to say, however, the ash alone did not lend itself to cultivation at once, since grain needs an abundance of nitrogenous matter, and a solider soil than the ash at first provided. Before men could inhabit the plain we must posit a long enough period of wild growth, the invasion of jungle plants and forests which could create a sufficiently thick humus for agricultural purposes. Such forests did invade the plain. Not only do all the authors preserve the traditions of forests and sacred groves that are mentioned in the tales of the early kings, but Theophrastus[5] still knew of Latium as a source of timber as late as the third century: "The land of the Latins is well watered, and the plains bear the laurel and myrtle and remarkable beech trees. Trunks are found that singly suffice for the keel beams of the great Tyrrhenian ships. Fir and pine grow upon the hills. The Circaean promontory is thickly overgrown with oaks, laurels, and myrtle." It is interesting to find that the beech then grew in the Latin plains, for now that the Campagna is parched and treeless it has withdrawn to the hills, if not to the mountains.

[4] *Bull. dell. Inst.*, 1871, p. 34.

[5] Theophrastus, *Hist. Plant.*, V, 8, 3. *Cf.* Pais, *Storia Critica di Roma*, vol. I, p. 627.

With this growth of timber from a subsoil which had many excellent qualities, a very rich soil was being formed for farming when once the Alban volcanoes should cease pouring out the flames that kept the hill peoples back in fear. There can be little doubt that the region was far from being semi-arid then as it is now. Today the grass parches brown in June, not to revive again till near October, and the wheat is hurried to a premature harvest in the middle of June. But Varro sets July down as the month of harvest in his day and summer rains are frequently mentioned in the classical authors. It would be hazardous to assume a theory of "climatic pulses" by way of explanation of this difference, and it is doubtful whether a mere two thousand years in the long recession of the glacial period could cause a perceptible change in temperature. The explanation of the change is no doubt to be found in the almost complete deforestation of Latium and the mountains behind. There can be little doubt that when the Sabine ridge from Praeneste to Monte Gennaro and the whole Volscian range were a thick forest instead of the parched white rocks that now stand out, the cool mountains caused condensations and precipitation over the plain when struck by the humid sirocco. Not only that, but the areas of forests still standing on the mountain sides and plains retained the water long and afforded a lasting subsoil supply and an abundance of nightly dewfalls which do not now exist when the last rains of spring leap off the bare rocks and flow away at once in torrents to reach the sea.

When therefore the early settlers pushed down into the Campagna and burned out "clearings" for farming (indeed the Terramara folk had then practiced systematic agriculture in the Po valley for many centuries), they found a soil remarkably rich, though not yet very deep, and the warmth and humidity that make the harvest heavy. The population in time grew dense, as would be expected from such conditions. There is nothing improbable in the tradition of the fifty villages that Pliny has preserved. The treasures now being gathered into the museum of the Villa Giulia from the ruins of sixth century Ardea, Satricum, Lanuvium, Gabii, Praeneste, Nemi, Velletri, Norba, and Signia, speak of an era of prosperity that no one dared imagine a few years ago. The ancient lords of these cities, which became malarial wastes before Cicero's day, decked themselves and their homes in the gold and precious stones of all the lands from the Baltic Sea to the Mesopotamian valley. Yet the wealth which made possible all this dis-

play did not spring from Latin industry or from commerce directed by Latins, if we may trust the evidence of archaeology now available. It was the produce of a rich soil cultivated with unusual intensity which paid for it, and kept alive a thick population such as would probably compare with the swarming tenancies of the Po Valley today.

There are numerous relics from that remarkable agricultural period still to be found in Latium, traces of drains, tunnels, and dams that are all too little known. The modern Italian farmer who hardly finds his land worth the merest labor of planting and harvesting fails to see how in a former day the owners could have secured returns for such enormous expenditure of labor, and, when asked to suggest an explanation for these ancient works, resorts to fantastic theories of mining and siege works. A convenient place to study the intricate draining system of that time is the district below Velletri. Here as De La Blanchère[6] discovered some forty years ago the ground is honeycombed with an elaborate system of tunnels running down the slopes of the hills toward the Pontine marshes, *cuniculi* as he calls them, about 3 by 1½ feet, cut in the tufa a few feet below the surface and usually along the sides of the numerous ravines. The system involved hundreds of miles of excavating. De La Blanchère was unfortunately misled by the then prevailing "miasmatic" theory of malaria into believing that these tunnels were cut to drain the soil of pest waters. But they occur only on the slopes where the land drains all too readily without aid; they do not touch the stagnant Pontine marshes below. However, he also suggested as a possible theory what seems indeed to be the true explanation. They were apparently cut at a time of such overpopulation that every foot of arable ground must be saved for cultivation. By diverting the rain waters from the eroding mountain gullies into underground channels the farmers not only checked a large part of the ordinary surface erosion of the hillside farms but also saved the space usually sacrificed to the torrent-bed. I know of no other place where labor has been so lavishly expended to preserve the arable soil from erosion. The ground must have been precious indeed, and the population in sore need to justify such heroic measures for the insurance of the annual harvest. Similar systems are found in the valleys north of Veii and were probably built under

[6] De La Blanchère, *Un chapître d'histoire Pontine*, in *Mél. d'archeol. et d'hist.* (1882).

similar conditions. Indeed, the remarkable cutting 75 yards long at Ponte Sodo[7] near the citadel rock of Veii through which the Fosso di Formello has ever since flowed seems to have been undertaken to save a few acres of the circling river bed for cultivation. Similarly the emissarium of the Alban lake, 1,300 yards long and 7 to 10 feet high, was cut through solid rock to save a few hundred acres of arable soil on the sloping edge within the crater. Even with the tools of modern engineers, that task would not now be considered a paying investment. Finally let the student of intensive tillage take a morning walk from Marcellina up Monte Gennaro through the steep ravine of *Scarpellata.* It is usually dry, but after a heavy rain the water pours down in torrents, carrying off what little soil may tend to accumulate. To save small alluvial patches in the course of this ravine the ancient farmers built elaborate dams of finely trimmed polygonal masonry that still withstand the torrents. The masonry is largely made of huge blocks weighing half a ton each and is in no wise inferior to the magnificent "cyclopean" masonry of Segni's town walls. And yet each of these dams could hardly save more than half an acre of arable soil.

It is impossible after surveying such elaborate undertakings to avoid the conclusion that Latium in the sixth century was cultivated with an intensity that has seldom been equalled anywhere. When, furthermore, we consider that the tools of that period were the spade and mattock, we may be sure that each man's allotment was very small, doubtless no more than the two jugera that Varro assures us sufficed for the support of the ancient Latin family. It follows that Latium supported a very densely settled population. With these facts in view the historian can understand whence came the armies that overran the limits of Latium and overwhelmed all obstruction when once they were set in motion, why Veii fell, why the burning of Rome was so quickly repaired, and why Campania called all the way to Rome for aid when threat-

[7] Since Roman Veii stood near this Ponte Sodo (Solidum), it is probably this tunnel that later tradition assigned to the sappers and miners of Camillus' army. The stories of mining operations at the siege of Veii may account for the strange tales that connected the emissarium of Lake Albanus with the Veian siege (Livy, V, 15). The Romans do not mention the tunnel that drains Lake Nemi, though it is twice as long as the Alban one. It must have been cut before the temple of Diana became very important. The Valle Ariciana and the crater lake on the via Praenestina were also drained at an early date.

ened by the Samnites. It is very probable that when the soil began to show signs of exhaustion under this severe strain, an inadequacy to feed the population which is proved by the desperate methods mentioned above, the growing generations found it necessary to find more room, and that the expansion of the Latin tribe dates from this condition.

The elaborate engineering feats just mentioned are also interesting in providing further data regarding the social groupings of the people of that day. We have generally supposed that the early Latins built their homes together in village groups as the Indo-Europeans so generally did, as the more backward Italic peoples still did in Strabo's day, and as in fact Pliny implies in his tradition of the fifty Latin villages. There is indeed nothing to contradict this view, but we cannot well continue to posit a thoroughly democratic system of communities governed by commons of equal rights and well distributed land-ownership throughout, such as is found, for instance, in so many districts of France today. Small owners could never command the labor and resources required to build the dams found above Marcellina. And the extensive drainage shafts below Velletri, each of which pierced beneath hundreds of individual plots, could not be the work of small holders, nor is it likely that the political organizations of primitive democratic communities were capable of the initiative and sustained efforts that these imply. It is highly probable that such works of enterprise were undertaken by landlords who owned extensive tracts and could command and direct the labor of numerous tenants. It was no doubt such wealthy landlords that lived in the palaces of the hill towns, remains of whose gold ornaments and decorated plate have in some small measure been preserved here and there in unrifled graves. And it was probably a residue of such lords that directed the revolt against the usurping Etruscan princes in the sixth century and founded the Latin aristocratic republic with its powerful patrician senate.

We have remarked that the very intensity of the effort to reclaim small bits of eroding land was a proof of overpopulation and of a dangerous drain upon the productive qualities of the soil. The danger of soil exhaustion was peculiarly great in Latium for several reasons. As noticed above, the soil of Latium had not had a long time for accumulation. Along the extensive ridges of lava that radiate from the Alban hills toward the Anio, along the Appian way, and down toward Ardea, the surface was so hard

that soil-making was well nigh impossible. In such places the plow cannot now be driven. A mere scratch in the thin turf exposes the rock. In other places the conditions were more favorable since the ash and tufa are fairly productive for plants of powerful roots when covered with a humus of proper physical consistency and containing some nitrogenous matter. The surface was, however, new and therefore thin everywhere except in alluvial valleys. To add to the danger, the ash had fallen unevenly in knolls that time has not yet shaped down into a peneplane. In consequence the Campagna presents to the abrading rains of winter a very uneven surface, and when the Latin settlers had once stripped the turf and forest from that surface, the thin soil was in danger of washing away. It is not surprising that the Latin farmer found it necessary to entice the thieving rainwater into underground channels with the utmost speed. The surface loam was very precious and must be saved. With all their efforts, however, the exhausting harvests and the continual erosion did its work, and Latin agriculture was doomed, and with it the thick adornment of prosperous Latin villages. The situation could well be illustrated by the history of agriculture in the "white sand" districts of central Pennsylvania, where the traveller today passes through large areas of country almost uninhabited though well studded with barns and farmhouses now abandoned and falling into ruin. Here the settlers of two centuries ago found a rich but thin alluvial soil lying over a subsoil of sand. A century of reckless tilling gained great wealth out of the soil, but when that was exploited the land was of little value and the farmers left it. The situation in Latium never grew equally desperate, nor will it, since the subsoil there, even though slow to yield its wealth to the feeble roots of mere annual vegetation, is nevertheless comparatively rich. Yet, to judge from the constant cries of distress reported by the early books of Livy, the fifth and fourth centuries before our era were years of increasing exhaustion. To add to the desperate situation, the extensive forests which had insured rainfall well into the summer and had helped husband the moisture in the dry season were ever giving way to the axe. The pressing demand for land resulted in the clearing out of every tract that could be made arable; the abundant population laid large demands upon the forests for lumber; and commerce, as we have seen, carried Latin timber as far as Greece, now well stripped of trees. The deforestation of the Volscian mountains on the south of the Campagna re-

sulted in ruin of that whole region, for the rains washed the mountain sides clear of soil, carried down the detritus into the flat plain below, choked up the course of the streams and turned what was once the garden spot of several large cities into malarial marshes, a pest not only to its own dwindling population but also to villages as far north as Satricum and Asturae. Norba, Cora, Setia, and Privernum dwindled down to unimportant hamlets. The same process of deforestation of the Sabine hills turned these also into bare rocks. Precipitation decreased, the dry seasons grew in length, the rain that fell found its quick course to the sea and Latium became gradually the semi-arid plain that it is today.

While this change was in process the farmers naturally sought for remedies. There was scarcity of manure because during the very intensive tillage when every acre was in use it had not been profitable to keep cattle since beef was rarely served as food, and horses were not in general use. When, however, many farmers found the loam too thin for further cultivation they had no choice but to seed their fields into pasture land, since a turf could at least protect whatever loam remained. A few oxen were needed as draft animals, and the wealthy lords of the city provided some market for the meat. Sheep were also in demand for wool, though this had generally come by barter from the mountain pastures that were fit only for sheep raising. Goats might be raised for milk and cheese.

The chief difficulty for the shepherd and herdsman was the lack of grass in August and September, which necessitated the laborious work of cutting leaves from trees. However, in the fourth and third centuries, when the neighboring mountain pastures of the Volscian and the Sabine hills fell within the political sphere of Rome, a profitable combination of summer and winter pastures became possible. Whether it was the Latin landlord who sought to tide over the arid summer by resorting to the mountain pastures in the dry season, or whether it was, as in the middle of the last century, the Sabine flock-owners who discovered green and warm winter pasturage for their flocks in the abandoned farms of the Campagna, we do not now know. But when once the discovery was made the Latin landlords were quick to seize the opportunity or to find a now profitable use for land that would no longer yield a reasonable harvest of grain. The earliest record we have of Roman slaves in great numbers shepherding on the mountains near Rome dates from the Second Punic war[8]

[8] Livy 32, 26.

but since such notices are incidental and rare we need not assume that the custom was then of recent date. He who has had the misfortune of trying to make his way in a Ford from Tivoli to Rome against the endless procession of sheep going mountainward during the first week of July knows well what Horace[9] meant when he wrote:

Jam pastor umbras cum grege languide quaerit.

This change, however, had serious consequences. Profitable sheep and cattle raising required capital, if indeed pastures were to be provided in two regions; and obviously, since the shepherding of a hundred sheep required little more labor than the care of half a dozen, the poor farmer with his small plot fell quite behind in the competition. Thus the small farmers gradually yielded ground to the master who could command the capital of large-scale ranching; and a general "enclosure" movement began at the expense of the grain fields. Again, since little skill was required, slaves were bought to care for the herds, and henceforth an area of a thousand acres, which in the days of profitable tillage had supported a hundred peasant families now fell to the charge of a few foreign slaves living at random. The depopulation of the Campagna proceeded apace.

Another industry presently hurried the process of crowding agriculture out of the Alban region. Here the abrasion of the soil had been most rapid because the slopes were steeper, but it was discovered that while the weak roots of annual plants like wheat and barley could no longer cope with the soil, grape vines and olive trees could readily nourish themselves even in the tufa and ash that remained. All that is necessary is to hack out and crush the tufa, plant the roots deep with a handful of loam for the plant to feed upon when young. When the plant grows strong it finds its own nourishment where grain fails in the struggle. From that time to this the vineyards and olive groves have never disappeared from the hills and valleys about the Alban lake. Obviously this industry also was developed by the men of wealth who could afford to wait five years for the first vintage and twenty years for the first returns of their investment in the olive groves.

It is customary to say that when Rome gained possession of Sicily in the first Punic war and thus inherited from Carthage the grain tithes of that island she destroyed agriculture in Latium by flooding the market of the Latin farmer with cheap grain. But

[9] *Carmen*, III, 29, 20; *cf.* Varro, *R. R.*, II, 1, 16, Pliny, *Epist.*, I, 17.

is it probable that the Roman landlords, who after all controlled the State, would have adopted a policy so ruinous to their own interests? Or is it possible to suppose that they were so stupid as not to see what would be the result of bringing the Sicilian tithe to Rome? Is it not far more reasonable to suppose that the process we have sketched had actually progressed far by the middle of the third century, that Latium had already become a failure as a grainland, that the landlords had already turned to other industries, and that the Sicilian grain filled a need already keenly felt? It would seem then that the revolution in the agriculture of Latium had already progressed far before the first Punic war.

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THE PURPOSES ACHIEVED BY RAILROAD REORGANIZATION[1]

A railroad reorganization centers about the means chosen to rehabilitate the bankrupt property, and the practical expedients available. It has been recognized by all men concerned in the actual reorganization of a railroad property and by all students of the subject that two primary ends are always present. New money must be obtained from either the old security holders or the new investors, or from both, in order to meet the debts incurred by the receivership, and to provide the reorganized road with new money for improvements and reconstruction. This is admittedly only a temporary aid, but it is necessary, in order to protect the road during the critical period of its rehabilitation. Further, the load of fixed charges, such as bond interest and rentals, the payment of which probably occasioned the railroad failure, must be reduced so as to be well within the earning capacity of the new road. This is the permanent end achieved by the reorganization; it assures a solvent and prosperous railroad long after the period of rehabilitation has passed. The two primary ends of every railroad reorganization are therefore the increase of available capital and the reduction in fixed charges. This article discusses the practical expedients employed to attain these primary ends.

Any generalizations concerning the means employed in contemporary railroad reorganizations must of necessity be very general. All railroads differ among themselves. The specific causes of railway failure are never the same in two instances. Consequently, in order to discuss reorganization plans in any except the most general terms, and to treat of the subject with clearness and definiteness of outline, it is necessary to arrange railroad reorganizations themselves according to some kind of system of classification, else any discussion of the subject degenerates into a mere jargon of unordered cases. But a classification of railway reorganizations is difficult owing to the extreme difficulty of determining a proper system or scheme.

From all points of view, the most valuable way of classifying

[1] Preceding articles are: "The Theory of Railroad Reorganization," published in the December, 1918, number of the American Economic Review (vol. VIII), p. 774; and "The Procedure of Contemporary Railroad Reorganization," published in the March, 1919, number (vol. IX), p. 1.

railroad reorganizations themselves (and the practical expedients used in accomplishing the two primary ends), is in terms of the causes and extent of the embarrassment which occasioned the necessity of reorganization. In other words, reorganizations are best classified according to their causes. Financial embarrassment, actual or threatened, is the cause of the crisis of which reorganization is the remedy. A reorganization, therefore, can be successfully consummated only as it removes the cause, so that any attempt at classification must recognize that the form as well as the concrete details of railway reorganizations will vary according to the nature, extent, and seriousness of the failures which caused them.

There are, in general, three types of railway failure—two pertaining to large railway systems, the third confined to small independent railroads.

The first type, which we will hereafter call *primary failures* and the resulting reorganizations *primary reorganizations*, is the result of an embarrassment which is serious, thoroughgoing, and usually long protracted. This class embraces real financial and economic failures of our large railways. In the actual experience of a particular case, one may assume that the crisis has been coming on for many years. Various palliatives have been applied. Various expedients have been tried; not infrequently some expedient has even approached the scope of a reorganization. Every known device of economy of operation has been tested. Usually the railway system has been over-extended into new or competing territory in the hope of increasing the stability of net earnings through increased gross revenue. Ordinarily, every available prop in the way of association and combination has been tried to increase the available net earnings; every known financial device of lease and guaranty, of collateral trust bond, debenture and short term note, has probably been resorted to in order to secure money and bolster up a declining credit. All these expedients are at most mere palliatives. They avail nothing. The net earnings continue to decline, the bond interest and rentals increase more rapidly than the earnings. The margin available to the stockholders grows narrower and narrower, and the credit poorer and poorer. Such conditions are fundamental. Yet as the current liabilities of a railroad are always relatively small and its floating debt is, or ought to be, insignificant compared with its total capitalization, the conditions described may continue for some time before a

specific crisis brings about an outward acknowledgment of failure. The important consideration, however, is that the railway system as a whole is a failure economically. Its earning capacity cannot justify its capitalization.

The second class, called hereafter *secondary failures* and the resulting reorganizations *secondary reorganizations*, embraces those railroad failures which cannot be called fundamental. The earnings, for a few years past, may have fallen off; bad crops, floods, or strikes in the principal industries may have produced conditions seriously affecting the gross receipts, while the operating expenses and fixed charges remained the same; short term notes or a maturing bond issue may have created financial embarrassment. At all events, a crisis occurs and the railroad's credit cannot withstand it. Failure results. But the causes underlying it are not fundamental. And the remedies that need be applied are neither as comprehensive nor as radical as is necessary with failures of the primary type.

The third type pertains only to small, unimportant, and often unfinished lines of railway. Sometimes the existence of the road was unjustified by the volume of traffic. Sometimes the road was built merely for strategic purposes. Sometimes the road was so grossly overcapitalized and mismanaged, during the construction period, that it became insolvent before it was born. At all events, the railroad is a thoroughgoing failure.[2] But this failure, due to the insignificant importance of the road or the absence of its obvious public necessity, is not of great economic significance. Its securities are probably closely held and the failure is not confessed until the last phantom of its credit has vanished. In the restricted and local significance of the undertaking, and in the extent and thoroughness of their distress, the failures of these little local lines resemble the failures of small local industrial enterprises. Failures of this kind are hereafter called Class III.

The resulting reorganization plans and expedients follow closely this classification of railway failures. The reorganization of a railway, the failure of which is of the first class, is thorough, comprehensive, and radical. Practically all securities, even small underlying closed first mortgage bond issues, are refunded. And

[2] One little railroad of this type, the St. Louis and Hannibal, was organized in 1872 and the main line opened in 1882. In 1886 the company issued first mortgage 7 per cent bonds, yet has never paid a single coupon from then until now. The road has just been reorganized, through refunding these bonds into common stock.

while the holders of these underlying bonds are not ordinarily asked to endure any sacrifices, they are asked to refund their variety of divisional issues into a single comprehensive first mortgage bond issue covering the entire railway system. Ordinarily the interest rate on this single issue is lower than the average rate on the small issues which it refunds, so that it is often necessary to increase the principal or add a complement of junior securities in order to placate these old bondholders. The holders of junior bonds, provided the interest on them can be earned unquestionably, are usually given bonds of a "general" or refunding issue. All other bonds, upon which little or nothing was earned in the years before the failure, are forced to take a preferred stock in the new company. The old preferred and common stocks are assessed, and offered new preferred and common stock. As a result of these changes, a complex financial situation, involving a multitude of small divisional issues, followed by several layers of nondescript bonds, followed in turn by notes and preferred and common shares, is simplified and standardized. There are one or two senior issues of bonds, one issue of preferred stock, and one of common. Considerable amounts of new money are added through stockholders' assessments; the fixed charges are reduced by the refunding of the old underlying and first mortgage bonds into one or two issues of new low interest rate bonds, and by refunding the junior bonds into preferred stock. The reorganization, like the failure it follows, is penetrating, drastic, and comprehensive.

Reorganizations following failures of the second class are superficial compared to those described in the previous paragraph. As the failure is not fundamental, a radical readjustment of the financial structure is neither necessary nor advisable. Accordingly, no attempt is made to disturb more than the stocks and junior bonds, and no radical sacrifice is demanded of any security holder. In many cases the whole reorganization turns on the willingness of the holders of some large overlying issue of refunding bonds, notes, or debentures to refund these into preferred stock or income bonds, bearing the same nominal investment return. The charges on the junior bonds become contingent instead of fixed. In return for this sacrifice from the junior bondholders, the stockholders consent to an assessment, receiving in return securities of relatively high value. As a whole, such a reorganization disturbs a comparatively small number of securities, and these are only the uppermost layers of the financial structure. The failure is not serious and a serious remedy is not required.

Reorganizations of railway failures of the third class are exceedingly drastic. The little road has been bolstered up by every conceivable means. Probably when it failed the earnings were actually less than its expenditures. The rolling stock and roadbed are dilapidated. Consequently, relatively large amounts of receiver's certificates are issued immediately, in order to maintain the road in operation. At the time of reorganization, these must be paid. Yet the value remaining to the stockholders is so slight that they will not endure an assessment in order to maintain even their shadow of an equity. As a result, the full brunt of the reorganization falls on the bondholders. Ordinarily there is a single issue of bonds. Accordingly, the holders assess themselves to pay off the receiver's certificates and to furnish the requisite new money. In effect, they take over the ownership of the road from the old stockholders. In some instances, not only the stockholders' interests are eliminated, but also those of all the bondholders and the road is taken over by the holders of receiver's certificates. In cases of complete failure, the holders of the receiver's certificates may be forced to assess themselves to maintain the operation of the road.

The first of the three types just described stands for serious and fundamental failures followed by drastic and comprehensive plans of reorganization. The other two types are modifications of this—the second type representing less serious failures followed by merely superficial reorganizations, and the third type the utter failures of small local railways. In view, therefore, of the greater significance and greater intricacy of the first type of railroad reorganizations, our study of the expedients to be used in reducing fixed charges and securing new money will refer explicitly to reorganizations of this type. The expedients used in the second and third types are modifications of those employed in the first type.

At the time of the serious failure of a great railroad system with an intricate financial structure, it is found that there exist at least three classes of bonds or fixed charge securities, one or more classes of contingent charge security, and the common stock. The three classes of bonds are of three different levels. The first, both in point of time and priority of security, include the old underlying main line and divisional bond issues created during the period of construction and still secured by first closed mortgages on most, if not all, of the important lines of the railway. The

second level consists of an issue of general first mortgage bonds, and possibly issues of second and third mortgage bonds. These bonds embrace the entire railway system. They represent liens subsequent to the bond issues of the first level, when such exist, and a first lien on such parts of the system not covered by underlying liens. These issues were created after the railway system had taken form—during the period of development, in contra-distinction to the previous period of construction. The third level represents the numerous junior issues of general, consolidated, or refunding mortgage bonds, debentures and short term secured and unsecured notes, issued at subsequent times, usually at a considerable discount, or at a high rate of interest. Owing to the differences in lien, these three kinds of bonds are considered separately in effecting a reduction in fixed charges.

The first step in the problem of reduction of the interest charges on the bonded debt is the determination of the position of the old underlying or divisional mortgages. Invariably, unless the railway system had been reorganized before, and even then unless the previous reorganization had penetrated to the marrow, there will be found a host of underlying bonds, on branch lines and subsidiary roads, that have been allowed to continue in force because there seemed nothing else to do. These carry, ordinarily, high rates of interest, they mature at various dates and are secured by dissociated and often unrelated sections of line.

In a few of the earlier railroad reorganizations a temporary reduction in the charges on these underlying bonds was accomplished by requiring the holders either to refund or else surrender the coupons covering a definite period of years.[3] This effected merely a temporary relief and was based on the presumption that earnings would improve in a short time. It is, however, a method of reducing fixed charges never adopted at the present time, when the guiding principle of every railroad reorganization is to secure permanent strength.

Since the reorganization of the Wabash system in the late eighties, historically the first of the great comprehensive railroad reorganizations of Class I,[4] it has become the established practice

[3] Thus in the Chesapeake and Ohio Railroad reorganization of 1878 the first mortgage bondholders funded the coupons of the three following years into preferred stock and the second mortgage bondholders the coupons of the next six years. A similar plan was followed in the Erie reorganization of the same year.

[4] This particular reorganization is described in the first article of this series, Am. Econ. Rev., vol. VIII, p. 774.

to refund most, if not all, of the underlying and divisional issues into a single issue of first mortgage long-time bonds, bearing a low rate of interest and smaller, in principle, than the old underlying and divisional issues. It substitutes a single large bond issue for a heterogeneous mass of small issues; it simplifies the railroad's financial structure. It probably reduces the burden of fixed charges, and it may even reduce the principle of the outstanding bonded debt. From every point of view, therefore, this substitution is of advantage to old bondholders and to the railroad.[5]

The difficulty involved in securing the refunding of these issues lies in adjusting a fair equivalence between the old security and the new, and then in the very great practical difficulty of making the holders of these bonds consent to the exchange. No reorganization can succeed which is opposed by all concerned. No reorganization can succeed which is fundamentally unjust. Much care must therefore be exercised in arranging a fair exchange for the holders of the old bonds.

In determining the relative value of these old underlying and divisional bonds, reorganization managers are concerned with the fundamental property values behind the bonds—not with the legal status or legal phraseology of the bonds and their mortgage. The basis of exchange is economic and not legal. In assessing their economic value, two considerations are of primary importance: the essential earning capacity and the strategic position of the property covered by the bonds. In other words: What does the security of the bonds earn? How important to the reorganized road is the property covered by them? The first question can be answered only in terms of past experience, and it is frequently im-

[5] This is very well expressed in the circular of the Northern Pacific Reorganization Committee of March 16, 1896, advising the holders of the old general mortgage 6 per cent bonds of 1921 covering part of the system to exchange them for 135 per cent of new prior lien 4 per cent bonds of 1997 covering the entire system. "It is manifestly to the benefit of the holders of the General First Mortgage Bonds to secure an investment of longer continuance, and it is also to the benefit of all subsequent securities to diminish this unnecessarily large burden of annual fixed charges. . . . The advantage is obvious of a mortgage resting upon a complete and entire system, including main line and all branches brought into the new company, together with terminals, land grants and equipment, and having over $200,000,000 of bond and share capital behind it, securing a gold bond running for one hundred years, as compared with a bond at all times liable to compulsory retirement and secured by only part of the system." Plan given at length in *Commercial and Financial Chronicle*, vol. 62 (1916), p. 550.

portant to segregate individual station freight statistics and passenger receipts according to the lines covered by separate mortgages in order to ascertain the immediate earning capacity of the lines covered by those liens. This is particularly important in the case of branch and subordinate divisional lines, but of no importance in determining the earning power of main lines owing to the impossibility of allocating the receipts and costs of operation between the main and branch lines. The other consideration, that of strategic importance, can be determined roughly by an inspection of the railway map. The main lines have the greatest strategic importance and must be preserved at all hazards. Those branch lines which run into isolated unproductive territory have least. If the line would be of considerable importance to a competing railway system, the reorganization managers must face the possibility that, in case the bonds are disturbed, the bondholders may bid in the property and sell it to the competing system. In other words, the strategic importance of the line to the reorganized railway is affected by the answer to the question, What would, or could, the bondholders do if they assumed control of the property? If the line could exist independently, the bondholders must be treated liberally; if the line would be of no value independent of the reorganized company, then the bondholders can be counted upon to accept any reasonable offer made to them.

Generally speaking, there are three classes of the underlying bonds, arranged according to the fundamental earning capacity and strategic importance of the lines by which they are secured. There are first the old underlying first mortgage bonds on the main line. These are of primary importance to the system; in fact, without these lines there is no railway system at all, merely unconnected branches. Not only does traffic arise on these main lines, but over them moves the branch line business. The second class includes the later mortgages on the main line divisions—the class just described—and the liens on important branch lines possessing an assured independent earning capacity and considerable, though not essential, importance to the system as a whole. The third class includes the first and subsequent mortgage bonds on unimportant branch lines. Such lines will have failed to earn their fixed charges, and are, from any point of view, of little value to the system as a whole.

In arranging a proper basis of exchange between the old underlying bonds and the new securities to be given in order to refund

them, great care must be exercised that these differences are recognized. In each case the offer of exchange must be sufficiently liberal to guard against the need for large amounts of money to settle with the non-assenting bondholders,[6] yet not so liberal as to defeat the essential end of the reorganization by overburdening the new company with fixed charges. Each class and each issue must be evaluated by itself.

In rare cases, especially if there exist one or two small, main line issues, these underlying bonds are paid off in money.[7]

If one or two of these issues bear low interest rates, or mature shortly, they are allowed to remain undisturbed.[8] Ordinarily,

[6] In order to bring the property covered by underlying bonds completely under the cover of a new general first mortgage bond issue, when some of the underlying bondholders refuse to come into the reorganization, it is necessary to foreclose the mortgage. The recalcitrant bondholders are then paid off their proportion of the price realized at the foreclosure sale. It is invariably less than par. In the last Pere Marquette reorganization there were ten underlying and divisional issues. All the bonds of two issues were exchanged, the trustees being able to cancel the issues without foreclosure. Less than 3 per cent of all the underlying and divisional bonds were undeposited and had to be paid in money.

[7] Thus in the thoroughly comprehensive reorganization of the Northern Pacific Railroad in 1896 two small main line issues were at first undisturbed and then paid off in money. Together they represented about two million dollars—$1,834,500 Missouri Division 6's (1879-1919) and $369,000 Pend d'Oreille 6's (1879-1919), whereas the property involved in the reorganization exceeded two hundred million dollars.

Ordinarily these small, underlying, high interest rate bonds are worth well above par; and reorganization managers have, in the past, been accused of allowing a default in interest so as to force the holders to accept the payment of their bonds at par. This particular procedure was very vigorously condemned by the editor of the *Commercial and Financial Chronicle* in 1896, when many of the comprehensive reorganizations of the middle nineties were being discussed. "When," in the words of this financial observer, "these old underlying mortgages bear a high rate of interest and have also a good many years to run to maturity, there is of course an obvious advantage to a company in paying them off and replacing them with obligations bearing a lower rate of interest. In such a case it is difficult to resist the conclusion that the default has not been made with design or is not being purposely continued in order to force the holders to consent to the paying off of their bonds or to make concessions which it is not needful or right that they should make."—*Chronicle,* vol. 62 (March 21, 1896), p. 525.

[8] Various reasons exist which justify the continuation, undisturbed, of a few of the old issues. Sometimes these issues are so small that it seems inexpedient and too expensive to induce the holders to exchange them. Thus in the comprehensive reorganization of the Erie in 1895 none of the old underlying issues of the original New York and Erie Railroad were dis-

however, even when the issue is of the highest grade of main underlying bonds, the reorganization managers will refund them into a new first general mortgage by offering their holders special inducements.[9] If the new general first mortgage bond issue carries

turbed. Many of these bonds were held in England, many were in the treasuries of insurance companies. All of them commanded a high credit as investment securities, so that it would have been very difficult, if not impossible, to have induced their holders to have exchanged these underlying bonds for any of the second rate securities of the new Erie Railroad, created at the reorganization. Similarly, in the last reorganization of the St. Louis and San Francisco Railroad in 1916, an issue of $9,000,000 underlying first mortgage bonds of the original St. Louis and San Francisco Railway, issued in 1881 and due in 1931, were not disturbed. They had not been disturbed in the previous comprehensive reorganization of the St. Louis and San Francisco Railway in 1896.

Sometimes the underlying issues are destined to mature in a few years, and the saving in interest, through refunding them, will not compensate for the trouble and expense involved. In the numerous comprehensive reorganizations of the middle nineties, these underlying bonds were, for the most part, refunded. This is indicated by the statistics of the fifty-seven reorganizations studied by Meany. They involved approximately $1,250,000,000 of bonds of all descriptions. Of these, less than $200,000,000, or 15 per cent only, were undisturbed.—*Poor's Manual of Railroads*, 1900.

[9] If the securities outstanding upon the main line section are all out of proportion to the earning capacity of the physical property, then there must be a severe cutting down not only of fixed charge bonds but also of the stocks given as a bonus. This is illustrated in the refunding of securities of one of the affiliated Erie companies in the last Erie reorganization. At the time this affiliated line was called the New York, Pennsylvania and Ohio. It had been chartered in 1858 as the Atlantic and Great Western to unite certain small lines in and about Meadville, Pennsylvania, and ultimately became a very important main line link in the Erie's New York-Chicago system. It was financed by a Spanish French nobleman and English capitalists brought into the project by James McHenry, famous in the later history of the Erie railroad. It was a failure from the beginning, although its history, under the administration of McHenry, Gould, and General McClellan, form one of the most dramatic recitals in the history of American railroad promotion. It was successively leased to the Erie, and in the hands of receivers continuously. In 1894 when it finally became an integral part of the Erie system, its capitalization was at the rate of $395,000, a mile—about all of which had been contributed by foreign capitalists. Its reorganization involved one of the most extreme sacrifices which foreign bondholders of a prominent American railroad have been compelled to undergo. The first mortgage bondholders received 20 per cent in new first general 4 per cent mortgage bonds and 27 per cent in stocks. The second mortgage bonds were given only 20 per cent in common stock—then valued on the market at less than $10 a share. Finally the common shareholders of this unfortunate "main line" division were offered 1 per cent of their principal in this same common stock.

a lower rate of interest than these old underlying issues, as is very probably the case, the bondholder must be offered an increase in principal to equalize or compensate for the lower interest rate.[10] Quite often he is offered in addition a bonus of new preferred stock so that, should the reorganized railroad prove successful, he will receive an actual increase in income.[11]

Underlying bonds of the second class, later liens on the main lines and first liens on the important branch lines, can be treated much less tenderly than bonds of the previous class. The holders of this second class can be forced to undergo some sacrifice, because they will recognize that even if they can make their properties pay, should they attempt to operate them independently, it will involve large expense and much trouble. Consequently, they will refund their bonds if the offers of the reorganization

[10] This has been necessary in practically every comprehensive reorganization. The treatment of the underlying bonds in one of the recent comprehensive reorganizations is seen from the table given presently. But the practice was common in the great comprehensive reorganizations of the middle nineties, as these three cases indicate:

Name	Percentage of new bonds	Saving in interest rate (per cent)	Net reduction in fixed charges (per cent)
Norfolk & Western adjustment mortgage 7's......	130	3	1.8
Northern Pacific			
First mortgage 6's......	135	2	.6
Second " "	118½	2	1.3
Third " "	118½	3	2.5

In the case of the Baltimore and Ohio reorganization, the holders of some of the underlying bond issues were offered the principal in low (3½ per cent) first mortgage bonds, and a bonus of 12½ per cent in second mortgage 4's. The exact result was therefore very difficult to compute.

[11] A good illustration of the principle is the treatment of the underlying 6 per cent first mortgage bondholders in the old Toledo, St. Louis and Kansas City reorganization. There was due on these bonds 30 per cent of unpaid interest, yet the earnings of the road were ample to meet the current interest on the bonds. Clearly, the bondholders would expect that their unpaid interest should be paid, yet so much new money was required to meet the necessary charges that it would have been practically impossible for the stockholders to secure the necessary money. A compromise was necessary. The bondholders were given 100 per cent in new 3½ per cent prior lien bonds and in addition 62½ per cent in new 4 per cent second mortgage bonds, and 30 per cent in new preferred stock. By this arrangement they would receive the same stipulated income, $60 a year, but the principal of their bonded lien was increased and the bondholder had the opportunity of an increased income should the reorganization prove successful.

committee are at all reasonable. It is possible, therefore, to count on a slight reduction in fixed charges from this class of bondholders.

The third class of underlying bondholders can be treated very arbitrarily. Their properties have little value. Under no stretch of the imagination could they be made profitable if operated independently. In extreme cases they will not even be admitted into the reorganization. At most they will be given only a small percentage of new fixed charge bonds; and ordinarily they will be offered contingent charge securities such as income bonds, preferred stock, and common stock. Under any circumstances the refunding of this class of bonds will effect a conspicuous saving in the new fixed charges.

These principles can be understood from the detailed study of the refunding operation in one of the recent comprehensive reorganizations, that of the Pere Marquette Railroad in the autumn of 1916.[12] In this reorganization all[13] of the underlying and divisional bonds were refunded into a single issue of general first mortgage bonds—part of which bore 5 per cent interest and part 4 per cent. There were in all eleven separate issues of underlying and divisional bonds, aggregating $26,314,000[14] and carrying fixed charges to the amount of $1,268,160, or an average of 4.8 per cent. These eleven issues occupied very different strategic positions, both with respect to the status of their lien and the geographical position of the section of the railway securing them. The earning capacity of the branch lines varied also. With these differences, it is possible to classify these eleven issues into the three classes described in an earlier paragraph.

As a result of the process of refunding, the principal of these underlying and divisional issues was reduced by five million dollars and the fixed interest charge from $1,268,160 to $982,140, a reduction in charges of over 22 per cent.

Leaving now the whole class of underlying bonds, in the refunding of which no great saving in fixed charges can be anticipated, we come to the second level of bonds, that represented by

12 Throughout this discussion the Pere Marquette reorganization of 1916 is used as an illustrative case. It is the most thoroughly typical of any of the recent reorganizations of Class I.

13 Except for two small issues covering 199 miles of a Canadian subsidiary.

14 In this paragraph and in the tables pertaining to it, no cognizance is taken of the unpaid coupons. These were, for the most part, refunded into the same kind of security as the principal of the bond. A consideration of them, however, merely introduces complexities.

PLAN OF REFUNDING UNDERLYING AND DIVISIONAL BONDS, PERE MARQUETTE ORGANIZATION OF 1916.

Old underlying and divisional bonds						New securities used for refunding							
Name	Interest rate	Principal	Fixed charge	Character of lien	Class of underlying bond	First mortgage, 5 per cent: Per cent	First mortgage, 5 per cent: Amount	First mortgage, 4 per cent: Per cent	First mortgage, 4 per cent: Amount	5 per cent preferred stock: Per cent	5 per cent preferred stock: Amount	Common stock: Per cent	Common stock: Amount
Flint & Pere Marquette First Mort.	6	$4,000,000	$240,000	Main line	1	106	$4,240,000						
Flint & Pere Marquette First Mort.	4	1,000,000	40,000	Main line	1	100	1,000,000						
Detroit, Grand Rapids, & Western First Cons.	4	5,379,000	215,160	Main line	1			100	$5,379,000				
Chicago & West Michigan First Mort.	5	5,758,000	280,900	Main line	1	100	5,758,000						
Toledo Division, First Mort.	5	400,000	20,000	Important branch	1	100	400,000						
Flint & Pere Marquette Cons. Mort.	5	2,850,000	142,500	Main line (2d lien)	2	56.2	1,601,600	50	1,425,000				
Indiana Division, First Mort.	4	675,000	27,000	Branch	2			100	675,000				
Saginaw, Tuscola & Huron First Mort.	4	1,000,000	40,000	Branch	2			100	1,000,000				
Port Huron Division, First Mort.	5	3,325,000	166,250	Branch, unimportant	3					60	$1,995,000	30	$997,[illegible]
Chicago & North Michigan First Mort.	5	1,667,000	83,350	Unprofitable branch	3					33⅓	555,700	66⅔	1,111,[illegible]
Grand Rapids, Belding & Saginaw First Mort.	5	260,000	13,000	Unprofitable branch	3							100	260,[illegible]
		$26,314,000	$1,268,160				$12,999,600		$8,479,000		$2,550,700		$2,368,[illegible]
									$21,478,600				

YING AND DIVISIONAL BONDS, PERE MARQUETTE ORGANIZATION (

of ly- ond	New securities used for				
	First mortgage				5 p prefe
	5 per cent		4 per cent		
	Per cent	Amount	Per cent	Amount	Per cent
	106	$4,240,000			
	100	1,000,000			
			100	$5,379,000	
	100	5,758,000			
	100	400,000			
	56.2	1,601,600	50	1,425,000	
			100	675,000	
			100	1,000,000	
					60
					33⅓
		$12,999,600		$8,479,000	
				$21,478,600	

ties used for refunding								
	5 per cent preferred stock		Common stock		Fixed charge	Increase or decrease	Contingent charge
unt	Per cent	Amount	Per cent	Amount			
					$212,000	—28,000	
					50,000	+10,000	
,000					215,160	same	
					280,900	same	
					20,000	same	
,000					137,080	—5,420	
,000					27,000	same	
,000					40,000	same	
	60	$1,995,000	30	$997,500		—166,250	$99,750
	33⅓	555,700	66⅔	1,111,400		—83,350	27,785
			100	260,000		—13,000	
,000		$2,550,700		$2,368,900	$982,140	—$286,020	$127,535
,600							

the first mortgage liens covering the entire system. The problem of dealing with these bonds presents no such complexity as that attending the refunding of the underlying and divisional liens. If, as is quite often the case, the interest charges on these bonds were fully earned before and during the receivership, they must be treated with a full consciousness of the strength of their position. As the mortgage covers the entire road, these bondholders would have the power to foreclose their lien on the whole system and put through a reorganization of their own which would exclude both the junior bondholders and all the stockholders. They cannot, therefore, be asked to endure much of any sacrifice, although they can be counted on to coöperate in the simplification of the financial structure of the new road by refunding their bonds. Generally, however, the interest on these general first mortgage bonds was only partially earned before and during the receivership. In this case the bonds are refunded into a fixed charge bond and a contingent charge income bond or stock, the proportion depending on the relative strength of the old bonds.[15] In the extreme cases in which the interest on these general first mortgage bonds was not earned during the receivership, they are invariably refunded into a contingent charge security. Usually this is a preferred stock, ranking after the security given for the stockholders assessments.[16]

[15] This is well illustrated by the comprehensive reorganization of the St. Louis & San Francisco in 1916. Following the underlying and divisional liens there were $68,500,000 first general mortgage bonds bearing 4 per cent interest. These were refunded into 75 per cent prior lien 4's—the issue that became the first mortgage or the entire system and the same issue that was given for assessments and used to refund the underlying liens—and 25 per cent of a first income 6 per cent bond, the issue next following the prior lien mortgage. Although the interest on the income bonds was contingent on earnings, the current earnings of the road gave good assurance that the first income bond interest, at least, would be paid. This being the case, the holders of the old bonds would receive a slightly greater investment return, 4½ per cent instead of 4 per cent; but 1½ per cent was contingent.

[16] This was exactly the plan pursued in the other recent comprehensive reorganization, that of the Pere Marquette. The reorganization could very well be drastic because, by inordinately large depreciation charges on rolling equipment the receiver had worked out an operating ratio of 106 per cent in 1914! Nevertheless, even if less rigorous charges to depreciation and repairs had been made the operating ratio would be considered about 90 per cent, and the 10 per cent available for interest charges was fully absorbed by rentals and the interest on receiver's certificates and underlying and divisional liens. Consequently the first general mortgage bonds ($8,382,000 consolidated 4's of 1951) were required to accept their principal and unpaid coupon interest at par in new second preferred stock—the security ranking directly after a first preferred stock given for the stockholders' assessments.

The commonest method of dealing with these first general mortgage bonds is to refund them into a mixture of fixed and contingent charge securities, as described in the preceding paragraph,[17] because there is usually grave doubt whether or not, had adequate depreciation and maintenance charges been made, the interest on this level of bond had been rightfully earned. When this method of refunding is used, a sense of fairness demands that the volume of contingent charge securities given to offset the reduction in fixed interest shall be such that if the earnings of the reorganized road prove to be so large as to have warranted the payment of the old rate, then the payments in these contingent charge securities will more than make up the balance. That is, if an old 5 per cent first mortgage bond issue is refunded into 4 per cent bonds, par for par (or into bonds bearing the same rate but with reduced principal), then in addition the old bondholders should be given enough preferred stock or income bonds to amount, when the contingent charge is paid, to more than the reduction in fixed income return. This acknowledges that the first mortgage bondholder, by accepting part payment in a contingent charge security, becomes at least partially a partner in the fortunes of the enterprise. As he accepts a share of the burden of low earnings, he should be given a chance to profit through increased earnings.[18]

[17] This was almost invariably the method of treating this level of bonds in the comprehensive reorganizations following the panic of 1893. The actual working out of the procedure, in a rather complicated case, is shown by the final reorganization plan of the Baltimore & Ohio. Details in *Chronicle,* vol. 66, p. 1,235; enlightening summary given in S. Daggett, *Railroad Reorganization* (1908), pp. 24-27.

[18] This was illustrated in the refunding of the general first mortgage bonds in the St. Louis & San Francisco reorganization. (See note 15.)

Perhaps the best illustration of this principle on a large scale is afforded by the second Atchison reorganization. The first reorganization of 1888 and the second reorganization of 1895 were actually the successive parts of a single comprehensive reorganization, the first part refunding the underlying and divisional issues and the second part accomplishing a permanent reduction in fixed charges and the collection of new money from the junior security holders. At the time of this second reorganization, the net earnings, as corrected by Stephen Little, were less than six million dollars. The rentals, underlying bond charges and interest on the first general 4 per cent mortgage bonds slightly exceeded this. Consequently the fixed charge on these first general mortgage bonds must be reduced. This was done by giving the bondholder 75 per cent in new first general 4 per cent mortgage bonds and 40 per cent in 4 per cent income bonds. The holder of a $1,000 bond had his fixed income reduced from $40 to $30, but he was given an opportunity to receive $16 more if the earnings exceeded the interest on his own first gen-

The third class of security to be considered in a comprehensive reorganization is the heterogeneous mass of junior securities subsequent in position to the general first mortgage bonds. They may include the consolidated and refunding mortgage bonds, the debentures, and the short-term notes. It is at this point that the greatest saving in fixed charges is invariably made, for the reorganization plan invariably provides that these bonds shall be changed, in large part at least, into income bonds or preferred stock. The accomplishment of this, however, in actual practice involves delicate problems of adjustment. On the one hand, the volume of these contingent charge securities offered in exchange for the junior liens, debentures, and notes, must be sufficiently liberal to induce the holders to accept the exchange, else they will obstruct the course of the reorganization or force the committees to purchase their interest, however small it may appear to be; on the other hand, the volume offered must not be so large as to absorb any equity remaining to those securities offered to the stockholders, else the latter will not accept the reorganization plan and the requisite new money will not be forthcoming. Between this Scylla and Charybdis, the reorganization committee must steer its course. And the matter is to be decided solely on the basis of the exigencies of the situation. If the failure is very serious, as in the case of the Pere Marquette, not only are no fixed charge bonds given for this level of junior bonds, but the holders are required to pay an assessment and take, altogether, only preferred and common stocks in the new company.[19] Whereas if the failure is not so serious these bondholders may even be given a small proportion of their lien in new fixed charge securities. This was the plan followed in the other recent comprehensive

eral mortgage bonds. The exchange made the old fixed charge bondholder a partner in the fortunes of the reorganized Atchison system to the extent that he might be called upon to endure a loss of 25 per cent in his income in time of lessened earnings, while he stood in the position to gain 15 per cent in his income during periods of large earnings.

[19] In the comprehensive reorganization of Pere Marquette (seriousness described in note 16) there were three layers of these junior bonds above the preferred and common stock. Only the uppermost layer ($14,000,000 refunding mortgage 4's of 1955) were offered the privilege of exchange—and this into common stock. The two lower levels ($2,000,000 collateral trust notes and $5,000,000 debentures) were treated exactly the same as the old preferred and common stock. That is they were assessed 9¾ per cent and given 10 per cent in new first preferred and 20 per cent in new common stock.

reorganization, that of the St. Louis and San Francisco.[20] Ordinarily, however, judging from the comprehensive reorganizations of the latter nineties, the holders of these junior securities have been neither assessed, nor given new fixed charge bonds. They have been asked to accept, par for par, a preferred stock or an income bond. In this way, the refunding of them involves no change whatever in the gross capitalization of the road, but does involve the total extinction of the fixed charges previously carried by them. In fact, it is true to say that the major reduction in fixed charges at the time of a comprehensive reorganization of a railway occurs on these levels of junior bonds.

From this analysis, it is possible to summarize the practical expedients observed at the present time for reducing the fixed charges at the time of a thorough and comprehensive railroad reorganization. The old underlying and divisional bonds are refunded into one blanket issue, bearing a lower rate of interest. The ratio of exchange is determined in each case according to the earning power and strategic position of the property covered by the lien. On this level there is little reduction in fixed charges. The general first mortgage bonds are refunded into new general mortgage bonds, with ordinarily some slight saving in charges—the relative amount depending on the margin, if any, of net earnings available to the old general first mortgage bonds. All the bonds junior to these first mortgage bonds are refunded into a contingent charge security, involving the total extinction of fixed charges.

The methods of reducing the fixed charges in reorganizations of the second class—superficial reorganizations following temporary embarrassment or less serious failures—are mere modifications of the methods just described. As the failures of this class are less serious, so the sacrifices demanded of the security holders are less serious. The reorganization is less penetrating; it affects only the superficial layers of the financial structure.

In a reorganization of this class the underlying and first mort-

[20] There was only one bond issue on this level to be dealt with in the last reorganization of the St. Louis & San Francisco,—this $70,000,000 "general lien" 5's of 1927. These bonds were given 25 per cent in new prior lien 4's (the premier security of the reorganized road), 25 per cent in first income 6's and 50 per cent in second income 6's. Although extremely doubtful, still there was a possibility that, even with proper maintenance, something had been earned on these bonds. An allowance of 25 per cent in principal and 20 per cent in fixed income return was an acknowledgement of this possibility.

gage bonds are in no way affected. The railroad, both in the period before the crisis and during the receivership, fully earned the interest on these bonds. But this is not true of the junior securities. The interest on these was not earned and the apparent necessity of paying it precipitated the crisis. At this level, and only here, it is expedient and just to demand a sacrifice. Accordingly, the holders of these junior bonds are asked to refund them into contingent charge securities—income bonds or preferred stock. This involves the total extinction of the obligatory interest. These junior bonds, together with the stocks, are the only securities disturbed in a reorganization of this kind. And the new preferred stocks or income bonds given in exchange are quite as valuable as the old junior bonds, considering the decreased earnings of the road, so that little real sacrifice is asked of any of the bondholders.

Within recent years there have been three reorganizations of this class among important railroad systems. They were the last reorganization of the Wabash in 1915 and the very recent reorganizations of the Chicago, Rock Island and Pacific, and the Missouri Pacific. The plan adopted was exactly the same, except for individual peculiarities and unimportant details. The underlying and divisional bonds were undisturbed. The general first and second mortgage bonds were undisturbed. In each case the decrease in fixed charges was brought about by refunding one or more issues of junior bonds into a preferred stock, having a position just one step inferior to the security given for the stockholder's assessments. That is, the uppermost layer of bonds was refunded into a medium grade stock. Absolutely nothing was done to disturb any of the other layers of bonds.

Reorganizations of small local roads, the third class defined in the opening paragraphs of this article, are invariably very drastic. They follow very serious failures; so serious, in fact, that it is often doubtful whether or not the first mortgage bondholders have much of any real equity remaining to them. As a general rule, the financial structure of these little roads is simple—a single issue of first mortgage bonds and the common stock. As the failure is not admitted until conditions are very serious, the receiver is forced to issue receiver's certificates immediately. By the time the reorganization occurs, it happens not infrequently that about all the value of the railroad, as evidenced by its earning capacity, is limited to these issues of receiver's certificates. Consequently,

when the road is actually reorganized, the burden falls back on the shoulders of the holders of the first mortgage bonds, provided they wish to retain any equity above the receiver's certificates. In extreme cases, even, the holders of receiver's certificates may be called upon to make a considerable sacrifice in order to permit the railroad to continue in operation.

The reduction in fixed charges, although the more permanently important end of a railroad reorganization, must be accompanied by the immediate investment of new money, else the solvency of the new railroad is jeopardized from the very beginning. This new money is required to pay off the receiver's certificates, to settle with the creditors who are unwilling to take new securities, to meet the expenses of the reorganization, and finally to provide a fund to improve and rehabilitate the reorganized railroad.

There are two and only two ways by which this new money can be provided. Junior securities may be sold to the old stockholders who are thus lured into adding to their already bad investment by the promise of securing a stock interest in the new railway corporation; or securities, usually senior bonds, of the new corporation may be sold to an underwriting syndicate of bankers, who in turn offer them to the outside public. In the larger reorganizations following the panic of 1893, only the former expedient was employed. In all the recent important reorganizations, including those of Class I and Class II, both expedients were used.

The use and importance of assessments on old security holders has steadily increased since the reorganizations of the period following the panic of 1873.[21] They are in accord with the general

[21] Daggett concludes from the cases examined by him that assessments were more frequent after the panic of 1893 than before (*Railroad Reorganization*, p. 351). This would seem to be borne out by the presumption that the later reorganizations were more drastic than the earlier ones. On the other hand, the statistics of the fifty-seven reorganizations between 1884 and 1899, gathered by Meany, do not seem to support this belief. Of the fifty-seven, seventeen plans were announced prior to January 1, 1894. Of these, thirteen involved assessments on either or both stocks and bonds; of the forty plans announced after 1894, twenty-five involved assessments, or 62½ per cent (*Poor's Manual of Railroads*, 1900). The present writer believes that the generalization of Daggett is correct; and that the opposite conclusion to be drawn from Meany's statistics is due to the fact that he included many small financial readjustments. Many students of the subject, by a confidence in mere ungraded statistics, do not give sufficient attention to the distinction between large and small reorganizations, and the individual conditions of the preceding failure. Certain it is that not a single important railroad reorgani-

tendency to impose drastic sacrifices on the holders of the old securities as the price that enables them to preserve the shadow of their equity.

These assessments arise from the necessities of the road, and their distribution among the different classes of security holders is, unfortunately, treated much more as a problem of expediency than of justice. The fundamental economic and legal distinction between the stockholder and the bondholder is usually forgotten, and it is growing more and more to be the practice of railroad reorganizations to look at the position of all the classes of junior security holders as differing among themselves only in degree and not in kind. And while it is recognized that the common shareholders ought to suffer most in a reorganization, the members of the committee are concerned more with securing the required amount of money, somehow, than with meting out justice in accordance with a more or less obsolete distinction between owner and creditor. The second Atchison reorganization marked the transition from the old theories of reorganization to the new[22] and this very point is excellently illustrated by a circular sent to the junior bondholders at the time. After stating that the amount of money to be raised amounted to $14,000,000, the reorganization committee went on to say:

> The stockholders in the ordinary course should provide the whole of this amount . . . but the proportion of the assessment that would be borne by the stockholders could only be gauged by the amount of assessment that they would be willing to pay in order to protect their rights. This amount is believed to be $10 per share, and it is necessary that the second mortgage bondholders shall provide the remaining $4 for their own protection.

This statement at the time of the last Atchison reorganization embodies the theory of allotment of assessments now universally followed by railroad reorganization managers. The amount of money required is first determined from the reports of the engineers, traffic experts, attorneys, and receivers. The amount of assessment which the common stockholders will stand is then estimated by the bankers, their judgment being guided by both the current market price of the common stock and the probable market price of the new preferred and common shares which the reorgani-

zation has occurred from 1893 down to the assumption of federal control that has not been predicated on a considerable money payment by the security holders. Tables giving assessments in recent reorganizations are given later.

[22] This matter was discussed at some length in the first article of this series.

zation managers propose to allot to the common stock. The same processes of reasoning are applied to the old preferred stock. If the amounts which the two classes of stock are probably willing to pay in order to retain an interest in the reorganized railroad are not equal to the amount which must be raised from the security holders, then the remainder is assessed against the junior bondholders. Entirely practical questions fix the relative amounts of assessments. How much does the road need and how much can be drawn out of each class of security holder and how little given in return? In accord with this principle, based on expediency and not on justice, the assessments on the stocks of roads passing through a serious crisis, Class I, are smaller than those on roads suffering from a temporary embarrassment, Class II. The stockholders have less at stake in the former case and can therefore be counted on to contribute less.

In the recent reorganization of the Pere Marquette, illustrative of Class I, these principles are exactly portrayed. In order to secure the requisite amount of money, not only were the three classes of stock required to pay an assessment, but the two classes of junior bondholders were also called upon as well. A preferred stock was offered for the assessment, and only a small bonus of common stock. Under these circumstances, the common and even the preferred stock-holders would be willing to pay only a small assessment. It was fixed at 9¾ per cent. Moreover, since little or no value remained to the equity of the junior bondholders, no distinction was made between any of the junior securities. The reorganization managers considered them all equally bad. And if the assessment was placed as low as 9¾ per cent, the full requirement of new money could be obtained only as the two outermost layers of junior bonds paid the full assessment, just as if they had been common and preferred stockholders.

In the other recent comprehensive reorganization, that of the St. Louis and San Francisco, a somewhat different means was taken. A valuable security, general first mortgage bonds, (the same issue as that into which the underlying bonds were refunded and the same bonds that were sold to an underwriting syndicate) was offered to the stockholders, for their assessments. Under these circumstances the payment of a large assessment could be counted on, especially as a liberal bonus of common stock was offered with the bonds. Accordingly, the assessment was made 50 per cent, but arrangements were consummated at the same time to

enable stockholders to sell their new bonds so as to reduce the assessment.

In reorganizations of Class II, those following temporary embarrassment rather than serious failure, the assessments to the stockholders are consistently large. As already pointed out, the expediency of these large assessments is based on the presumption that, since the equity remaining to the stockholders is large, they will endure a large assessment in order to preserve it. And, again, because the railroad property has a value well above the bonded debt, the new securities offered in exchange for the assessments and the bonus of common stock can be made very liberal.

The following table illustrates these principles:

Assessments in Recent Important Reorganizations.

Railroad	Old security assessed	Amount of assessment (per cent)	Amount of new security given for assessment	Kind of new security given for assessment	Common stock bonus (per cent of par of old security)
Reorganizations of Type I.					
Pere Marquette	Collateral trust notes	9 3/4	10	1st pfd. stk.	20
	debentures	9 3/4	10	"	20
	1st pfd.	9 3/4	10	"	20
	2d pfd.	9 3/4	10	"	20
	common	9 3/4	10	"	20
St. Louis & San Francisco	1st pfd.	50	50	prior lien bonds	100
	2d pfd.	50	50	"	90
	common	50	50	"	82
Reorganizations of Type II.					
Missouri Pacific	common	50	50	gen. mort. bonds	100
Rock Island	common	40	40	pfd. stk.	100
Wabash	pfd.	30	50	1st pfd. stk.	50
	common	30	50	"	45
Western Maryland (voluntary)	pfd.	30	30	1st pfd.	100 (in 2d pfd.)
	common	30	30	1st pfd.	100
Wheeling & Lake Erie....	1st pfd.	27	27	pfd. stk.	100
	2d pfd.	27	27	"	90
	common	27	27	"	87½

Taking these important reorganizations as a whole, it appears that the following conclusions may be drawn.

1. In no case was there a difference in the rate of assessment for different classes of securities in any single reorganization.

2. The average rate was approximately 34 per cent, averaging each reorganization as a unit, and a trifle less than 30 per cent,

if each assessed security is considered a unit. Omitting the low assessment on the Pere Marquette securities the average was approximately 40 per cent by either way of computing it.

3. In cases where more than one class of security was assessed in the same reorganization, the security given for the assessment was always the same, and the differences in the allotment of the common stock bonus was negligible.[23]

[23] Were we to compare these reorganization assessments with those of the earlier reorganizations, we should find certain striking differences. In the first place, these assessments are larger; more money is now secured at the time of reorganization than was once. Formerly, especially in the reorganizations preceding the panic of 1893, a painstaking effort was always made to apportion the burden of assessments more nearly upon the relative position of the stocks. The common stockholder was usually asked to pay more than the preferred on the assumption that the burden should rest more heavily on those

TABLE 1.—EARLY REORGANIZATIONS.

Railroad	Date	Old security assessed	Amount of assessment (per cent)	Amount of new security given for assessment (per cent)	Kind of new security given for assessment
New York & Erie (Erie)	1859	preferred	2½	none	none
		common	2½	none	none
Erie Railway...	1877	preferred	2	none	none
		common	4	none	none
		or			
		preferred	3	3	income bonds
		common	6	6	income bonds
Denver & Rio Grande....	1885	common	8		
East Tennessee	1886	income bonds	5	5	1st pfd. stock
		common	6	6	2d pfd. stock
Reading	1886	income bonds	2½	2½	pfd. stock
		preferred	10	10	" "
		common	10	10	" "
Pittsburgh & Western.....	1887	common	4	8	pfd. stock
New York, Chicago & St. Louis	1887	preferred	10	10	1st preferred
		common	10	10	"
Iowa Central...	1888	debentures	2½	2½	debentures
		1st preferred	5	5	"
		2d preferred	10	10	"
		common	15	15	"

Average assessment on preferred stocks.... 5 per cent
" " " common stocks...... 7½ " "
" " " stocks .... 6.3 " "

Assessments on bonds unusual in reorganizations of Classes I and II.

In any reorganization, the practical determination of the amount of an assessment is a matter of great moment. It must yield all the new money required by the reorganization. Yet great care must be taken that the assessment is not so large as to frighten who would reap the largest benefit from pronounced success. The amount and the character of the assessments in the older reorganizations can well be illustrated from a series of tables of important reorganizations at different periods of financial history. The lists are in no sense exhaustive, although it is believed that the tables cover a fair random selection of important reorganizations.

TABLE 2.—IMPORTANT REORGANIZATIONS OF THE MIDDLE NINETIES.

Railroad	Old security assessed	Amount of assessment	Amount of new security given for assessment	Kind of new security given for assessment
Northern Pacific	preferred	10		
	common	15		
Richmond Terminal	common	10		
Erie (N. Y. L. E. & W.)	preferred	8		
	common	12		
Baltimore & Ohio	1st preferred	2	2	preferred stock
	2d preferred	20	20	"
	common	20	20	"
Atchison	second mortgage and income	4	4	preferred stock
	common	10	10	"
Reading	deferred income bonds	4		
	1st, 2d, 3d income bonds	20		
	common	20		
East Tennessee	1st preferred	3		
	2d preferred	6		
	common	7½		
Union Pacific	common	15		
Toledo, St. Louis & Kansas City	preferred	20	75	preferred stock
	common	12	25	"
Wheeling & Lake Erie	preferred	12	12	2d preferred
	common	9	9	"

Average assessment on preferred stocks 9 per cent.
" " " common " 12½ " "
" " " stocks 11 " "

Assessment on bonds unusual in reorganizations of Classes I and II.

Meager though these statistical tables may appear, they afford excellent material for exhibiting historical contrasts and the direction of the current

the stockholder into relinquishing his interest. To prevent this, the presumptive value of the new securities must be at least a little greater than the market value of the old stocks, together with the assessment, else the stockholders wili voluntarily allow their interests to die. Unless the equity remaining to the junior security holder is considerable, the assessment should be just large enough to induce its payment.[24] If the equity properly belonging to the stockholders is large (the embarrassment being easily attributed to specific and easily remedied causes—reorganizations of Class II, as heretofore defined), a very heavy assessment may be levied on the stockholders, as in the reorganization plans of the Missouri Pacific and Rock Island railroads in which the stockholders were asked to contribute $50 and $40 a share respectively.

in financial opinion concerning reorganization assessment. In the first place, it is unquestionably clear that the tendency has been toward increasing the amount of assessments. Of the eight representative reorganizations prior to the panic of 1893, the average assessment was only 6 1/3 per cent—and the assessments levied on the common stocks were conspicuously higher than on the preferred stocks and junior bondholders. A distinct effort was made to apportion the burden in accordance with the priority of the risk. Among the reorganizations of the nineties, the average assessment was 11 per cent, and there was less difference between the assessments on the different classes of stocks. Finally, among the recent important reorganizations (table given on page 297), the average assessment was 34 per cent; in fact, in two large and important reorganizations the assessment was 50 per cent. The tendency, too, is to apportion the assessment more evenly among the various junior security holders.

There seems to be little change in regard to the kind of security given in return for assessments. Except in rare, but rather conspicuous, instances, the new corporation gives the full par value of the assessment in a contingent charge security having first claim after the fixed charge bonds. This preferred stock or income bond is ordinarily the prior contingent charge security, so that it has a first claim on any surplus earnings above those necessary to meet the fixed charges of the new corporation.

[24] An excellent example is offered by the Wabash reorganization plan of April, 1915. Quotations are taken as average for a period of several weeks surrounding the announcement of the plan.

Stock	Market value of old shares	Money assessment	"Curb" quotation for the allotments of first preferred and common stocks received for the assessment ($48 for 1st pfd. and $14 for the common)
Common	.75	$30	$30.30
Preferred	1.37	30	31.00

But great care must be exercised that the assessment is not too large, else litigation will result;[25] or, at most, the stockholders will drop out.

The possibility of a dispute with dissenting stockholders may sometimes be avoided—especially in the case of less serious failures, where large amounts of new money are not essential to a successful reorganization—by giving the common stockholder the option to receive a small amount of new common stock without the payment of an assessment, or to pay an assessment and get more liberal amounts of new securities.[26] The apportionment of the assess-

[25] In the reorganization of the Houston and Texas Central (1888), the stock was assessed over 70 per cent—the highest assessment of which the present writer has learned; but serious and long protracted litigation resulted. The plan was first announced covering exchanges for all the bonds. It was accepted by all the bondholders, who, considering that the new bonds were guaranteed by the Southern Pacific Company, were actually benefited by the reorganization. The first announcement contained no stipulation concerning the stock assessment. Some three months later it was announced to be 40 per cent and still later 73 per cent. Protracted litigation resulted, in the courts of Texas and New York. Ultimately, a compromise was effected with the dissenting stockholders.

[26] Strange to note, the alternative of paying or not paying an assessment is confined to the two extremes—very mild, usually voluntary, readjustment reorganizations, and very drastic reorganizations in which all the junior security holders are eliminated. (Class I and especially Class III, to be discussed presently.) But there are specific reasons to account for this anomaly. In the case of the less serious reorganizations, merely readjustments, no foreclosure sale of the property is contemplated. The stockholders cannot, therefore, be forced into paying the assessment. All that can be done is to cajole them into paying it by offering a more liberal amount of new securities than if they refuse. The following examples illustrate this:

Railroad	Old security assessed	Amount of assessment	New securities
Minneapolis & St. Louis..	common	$20	$78 in common stock
	"	none	22 " " "
	preferred	$20	80 " " "
	"	none	70 " " "
Western Maryland	common	30%	(*Per cent*) 45 in valuable coal company stocks
			30 " 1st preferred
			100 " common
	common	none	100 " common only
	preferred	30%	45 " valuable coal company stocks
			30 " 1st preferred
			100 " 2d "
	preferred	none	100 " 2d preferred only

ment between the holders of the common and preferred depends on expediency entirely.[27] Presumably the preferred stockholder is in a stronger position than the common stockholder, but experience has shown that he will be compelled now[28] to bear quite as much of the burden as the common stockholders.[29] Sometimes, although not very often, the assessment on the preferred stock is greater than on the common,[30] on the assumption that the preferred share-

At the other extreme, the very drastic reorganizations are usually consummated through foreclosure by the underlying or first lien senior bondholders. To make the reorganization effective, and to reduce the payments to the non-assenting bondholders, most, if not all the bonds should be brought into the reorganization plan. This can be done best by offering an alternative consisting of a liberal participation to those electing to pay an assessment, and a smaller allotment of new securities to those who do not.

The following examples illustrate this. They are all Class III reorganizations. The principles governing the assessments on this class will be discussed presently. All securities, junior to the first mortgage bonds, were wiped out in every case.

Railroad	Assessment	New securities given (per cent)		
		1st lien security	2d lien security	Common stock
Gulf, Florida & Alabama	25	50	25	25
	none	10	10	10
New Orleans, Texas & Mexico	20	20	50	50
	none	0	40	25
Western Pacific	36	40	55	45
	none	0	12½	50

27 Daggett is in agreement with this view when he says with reference to the reorganizations since 1908: "In most instances referred to, common and preferred stock fared alike or so nearly alike that the differences were negligible." "Recent Railroad Failures and Reorganizations," *Quarterly Journal of Economics*, vol. 32 (May, 1918), p. 477.

28 The contrast between contemporary and past reorganization theory in this particular is brought out in note 23.

29 This principle is recognized by practical observers of reorganizations, especially by the professional trader who seeks to profit by the wide fluctuations in security values before and after a reorganization. For example, during the autumn of 1914, when the Pere Marquette was in the hands of receivers, a shrewd trader in Boston offered to give 100 shares of the preferred stock in exchange for 100 shares of common and a bonus of $100 in money. He believed that in any reorganization the common would fare as well as the preferred stock, and he would have $100 to his advantage. Unfortunately, for our sense of abstract justice, he was right.

30 The Toledo, St. Louis and Kansas City reorganization required $20 a share from the preferred stockholders and $12 a share from the common.

holder, having more at stake, will endure more without throwing away his security. In no recent case was the assessment on the preferred stock less than on the common. This principle is unfortunately unjust, but reorganizations are guided by expediency and coercion and not by abstract justice.

The discussion of assessments in reorganizations of Class III was purposely omitted from the summaries just given. Each reorganization of this type represents the effort to rehabilitate a small road after a very drastic failure. It is invariably done by the first mortgage bondholders, who alone have any value remaining to their securities. If the road is on the whole profitable, provided the immediate cause of its failure is removed, it may be possible to effect a reorganization without an assessment on the bondholders. In such cases the bondholders merely surrender a part or all of the fixed return on their security, in order that the reorganized road may divert the net income, that would otherwise go to pay interest charges, to its rehabilitation.[31] Ordinarily, however, new money must be had and the first mortgage bondholders alone have sufficient interest in the property to be willing to undergo even a slight sacrifice in order to maintain the existence of the railroad. Such cases are illustrated by a few recent reorganizations of Class III.

The radical failure of these little roads is apparent from this table, without further explanation. In one case, the holders of receiver's certificates were actually assessed.[32] All the arts of finan-

[31] A thoroughly typical case of a reorganization of a Class III road following just this plan is that of the Buffalo and Susquehanna Railroad. This road was built in the middle nineties to reach certain coal fields in northern Pennsylvania. It was fairly successful. In 1907 the Buffalo and Susquehanna Railway, the connection to Buffalo, leased the Railroad. The Railway defaulted on its rental in 1910, and the Railroad soon after defaulted on its bond interest. A receiver was appointed for the Railroad, who, through excellent management, proved that the Railroad alone, without the Railway, was a successful enterprise. In the reorganization, the bondholders were merely asked to surrender 30 per cent in principal and interest of their bonds, in return for liberal bonuses of preferred and common stocks. No assessments were levied on the bonds, because the sale of a small amount of the bonds of the new road, and its normal earnings, would meet fully the costs of the reorganization and the rehabilitation of the road.

[32] Besides the unfortunate Detroit, Toledo and Ironton case, a few other cases exist in which the holders of receiver's certificates were required to undergo a sacrifice. In the reorganization of the Atlanta, Birmingham and Atlantic Railroad in 1914, the holders of $4,476,000 receiver's certificates were required to accept a junior lien 15-year income bond. It is interesting to note

RECENT REORGANIZATIONS OF SMALL ROADS (CLASS III).

Railroad	Old security assessed	Amount of assessment	Amount of new security given for assessment	Kind of new security given for assessment
Cincinnati, Indianapolis & Western	1st mortgage bond	30	30	1st mortgage bonds
Detroit, Toledo & Ironton	receiver's certificates	25	41⅔	income bonds
	general lien bonds	35	58⅓	"
	consolidated bonds	10	16⅔	"
Gulf, Florida & Alabama	1st mortgage bonds	25	25	receiver's certificates
Oklahoma Central.	1st mortgage bonds	40	40	1st mortgage bonds
New Orleans, Texas & Mexico....	1st mortgage bonds	20	20	1st mortgage bonds
Wabash, Pittsburgh Terminal	1st mortgage bonds	30	30	preferred stock
Western Pacific...	1st mortgage bonds	36	40	1st mortgage bonds

cial persuasion[33] were used to stimulate the interest of the recalcitrant bondholders. In many instances, the bondholders failed to subscribe, preferring to lose their original investment rather than to meet a heavy assessment and thereby acquire securities of doubt-

that in both the Detroit, Toledo and Ironton, and the Atlanta, Birmingham and Atlantic cases the holders of equipment obligations were paid off at par—in the latter case at the time of reorganization, and in the former case through the liquidation of the equipment. Equipment obligations are invariably paid, or left undisturbed at the time of reorganization. For discussion of treatment of equipment obligations see a study of the subject in AMERICAN ECONOMIC REVIEW, vol. VII, June, 1917, p. 353 ("Railroad Equipment Obligations," by A. S. Dewing).

33 One unusual and ingenious instance of personal advantage dangled in the face of the bondholders in order to induce them to pay an assessment is afforded by the reorganization of a little road called the Nevada Central in 1888. In the reorganization there were issued no fixed charge bonds, but only 1st mortgage 5 per cent non-cumulative income bonds—due in fifty years. If, however, any bondholder would pay an initial assessment of 12 per cent on the par value of the bonds, a corporation known as the Nevada Company of New Jersey agreed to guarantee the payment of the semi-annual interest during the last forty years of the life of the bond.

ful value in an enterprise which had shown itself to be a failure.[34]

Whether obtained through the assessments on the old security holders or through the sale of new securities to the public, it is necessary for responsible parties to insure that the new railroad corporation receives the money expected. This is done by the underwriting reorganization syndicate, an important and necessary corollary of practically every reorganization plan. Formerly, the "reorganization trustees" were clothed by stockholders, creditors, and the courts, with sufficient power to superintend the reorganization and secure for the corporation sufficient money. But as one of the two ultimate purposes of every reorganization is to secure liquid capital for the new corporation, no reorganization can be

[34] A good illustration of this is the reorganization of the Wabash Pittsburgh Terminal Railway. This little road was built as the Pittsburgh link in a prospective Gould transcontinental system of railroads. The property of the company represented an actual investment of \$46,000,000, of which over \$28,000,000 represented the cost of the terminal in Pittsburgh, and a short section of 60 miles of road forming a junction with the Wheeling and Lake Erie Railroad and some equipment. The remainder represented the cost of investments in coal properties, a belt line, and the controlling interest in the stock of the Wheeling and Lake Erie Railroad. To finance these expenditures, reputable New York banking firms sold \$30,000,000 of the first mortgage bonds at approximately 91½. They were acquired by investors throughout the East; in fact, trust funds such as those of educational institutions were placed in them. Some \$20,000,000 second mortgage bonds were also sold although they were of an admittedly speculative character. In 1907, with the collapse of the Gould aspirations for a transcontinental railroad system, the Wabash Pittsburgh Terminal Railway passed into the hands of receivers. For upwards of eight years it was operated in an extremely inefficient manner by receivers. The gross and net earnings fell off each succeeding year; the first mortgage bonds declined to a value of 1—\$10 for a \$1,000 bond; and second mortgage bonds became practically worthless—\$1.25 for a \$1,000 bond. Finally, in 1915, a plan of reorganization was announced involving the assessment of \$300 on the first mortgage bonds, the holders to receive only non-cumulative preferred stock of a new company in exchange for their assessment. The second mortgage bonds were entirely eliminated as well as the stock. One firm of Wall Street brokers wrote to their customers: "If our surmise proves to be true, it will not pay the bondholders to throw good money after bad. Better let the property go on the auction block for what it will bring as junk and real estate. If this is done, it may happen that the bondholders will get more than two cents on the dollar." (Schmidt and Gallatin, *Weekly Review*, July 2, 1915.) A very large proportion of the bondholders refused to pay the assessment, preferring to see the extinction of their original investment. When this plan was announced, an editorial writer of the New York Times *Annalist* remarked: "The experience of these particular bondholders goes to show how very little indeed there is in a name."—*Annalist*, vol. 6, (July 5, 1915), p. 3.

carried through, no matter how just, unless the sources of new money or new credit are certain. Even though an assessment is imposed on the old stockholders, there is no necessity that they will pay the amount; in fact, it is sometimes quite uncertain whether or not any large proportion of the stockholders of a road whose shares are selling for less than ten dollars a share, will pay an amount greater than the market value of their shares. Although the acceptance of a reorganization plan by a committee of large stockholders may give an assurance that a goodly proportion of the assessments will be paid, the attitude of the rank and file of the stockholders will remain unknown until the plan of reorganization is actually put into execution. Meanwhile, the corporation must be assured that in any event the new money will be available. And, further, the willingness of the members of the syndicate—usually represented by prominent bankers—to furnish money to the new corporation, gives a sentimental support to the justice of the reorganization much greater than the exhortations of the reorganization committee.[35] It is this moral support of the reorganization, often quite as vital as the financial support, that justifies the expense and importance of the syndicate.[36] And in the matter of financial support a syndicate may guarantee the payment of the assessments by the security holders, and it may purchase outright an issue of new securities to be sold to public investors in the open investment market.[37] So important, indeed,

35 It was the success of the late J. P. Morgan in formulating reorganization plans which gradually gave him such a position, during the railway readjustment of the nineties, that his name in connection with any reorganization carried more weight than that of any other banker. As a result, all the important railroad reorganization syndicates, with the exception of the Atchison and the Union Pacific, were managed by the banking house under his control.

36 Frequently, also, the support of the credit of the new company in the stock exchanges and among the "curb" brokers and "specialty" houses is a matter of great importance. It takes tangible form in the efforts of the underwriters to support the market for the reorganized company's new securities. When a security has any value, trading in it is inevitable. Once the bonds of the new company have been issued, a market will be formed for them, somehow, by those who are forced by circumstances to realize on them before the road has begun to reflect the results of its rehabilitation. The syndicate cannot let the bonds go begging on the market among the curb brokers. Such a course would do lasting injury to the credit of the road and themselves. They must be ready to "hold the basket."

37 The various purposes of an underwriting syndicate are well stated in the reorganization plan of the Baltimore and Ohio Railroad. An outline is given in Daggett, *Railroad Reorganization*, p. 346.

are these underwriting syndicates that almost without a single exception, every railroad reorganization of even medium importance consummated since 1890 has been supported by an underwriting syndicate.

A syndicate of some form guarantees the payment of the assessments levied on security holders in practically every reorganization[38] and unless the terms offered the stockholders are very onerous, bankers can always be found to underwrite these assessments for a reasonable commission. The syndicate agreement takes the form of an obligation on the part of the incorporators or others responsible for the new railroad to pay the syndicate either a net commission on the entire aggregate assessment or else a round sum, in the form of a fee. In consideration of this commission or fee, the syndicate contracts to assume the place of any assessed security holder who refuses to pay his assessment. This implies that the syndicate will pay the assessment of the defaulting security holder, and take over the securities of the new corporation allotted to him. As a result of the foreclosure sale, the rights and interest of the defaulting security holder in the new corporation are extinguished.

The ease with which a reorganization committee may secure the underwriting of its plan, and the amount of commission or fees demanded from the new corporation will depend on the amount of risk involved. But, unlike other underwriting syndicates where the payment of money is insured, the syndicate managers can obtain a fairly accurate idea of the extent of the stockholders' probable payments. If they feel that in any plan suggested to them a very large proportion of the old security holders will fail to meet the assessments, the syndicate managers will insist that more liberal terms be offered. If the failure is severe, the old stocks commanding only a nominal market value, and if considerable assessments have to be levied on the old security holders, it may happen that no bankers can be found who will consent to arrange an underwriting syndicate. In such cases, junior bondholders are forced into assuming the status of an underwriting syndicate in

[38] Of course there are exceptions. The securities given in the recent Pere Marquette reorganization, in return for assessments, were thought to be so valuable that the reorganization managers believed that they could sell the securities of a defaulting bond and stockholder for the amount of the assessment. Hence they did not feel justified in paying a syndicate a commission for underwriting the assessments. But they did pay a syndicate a "commission" for purchasing some of the bonds.

that their participation in the reorganization is made conditional upon their willingness to guarantee the stockholders' assessments. Under these circumstances, the junior bondholders have divided among them the unpaid stock assessments and take over, in corresponding proportions, the new securities to which the defaulting stockholders would have been entitled.[39]

The other important service of an underwriting syndicate at the time of reorganization is the direct purchase of a considerable block of securities of the new corporation. Ordinarily, these securities occupy the status of a general mortgage bond, senior to all the new securities issued at the time of reorganization, but junior to the first, prior lien, and divisional bonds left undisturbed by the reorganization.[40] In fact it may even be said that there has been no large and comprehensive railroad reorganization during the last decade which has not involved the purchase of new securities by a syndicate of bankers as well as the guarantee of the payment of the stockholders' assessments.[41] These purchases are ordinarily made by the same syndicate that guarantees the payment of the stockholders' assessments,[42] the two transactions being regarded as part of one agreement.[43]

[39] Such a case is excellently illustrated by the last Wabash reorganization. There were outstanding a little over $40,000,000 junior bonds known as "first and refunding fours." These were to be refunded into second preferred stock at a ratio of 120 per cent. But at the same time, these bondholders were required to assume the payment of the assessments for the delinquent common or preferred stockholders. If all the stockholders paid their assessments, the bondholders would not be assessed; but if none of the stockholders paid, their participation involved a maximum liability of $682.76 for each $1,000 bond. These bonds were then selling at $200 in the open market.

[40] Such statements are, assuredly, subject to many exceptions. Sometimes the underwriting syndicate will buy for money, even the common stock of the new railroad. For illustration, in the very drastic reorganization of the Atlanta, Birmingham and Atlantic in 1916, the entire common stock was wiped out, and no attempt was made to levy any assessments on any securities. New money was obtained by the sale to a syndicate of the common stock of the new corporation at $12 a share, subject to a commission of 6 per cent in cash.

[41] The combination of the two functions was very common in the middle nineties, but not quite to the extent that it is now. Of fourteen typical reorganizations studied by Daggett "four provided cash by assessment, three by the issue of securities and five by a combination of both methods."—*Railroad Reorganization*, p. 351.

[42] Cases are by no means uncommon in which a banker or syndicate guarantees the stockholders' assessments and an entirely different one buys a block of new first or general mortgage bonds. Such cases, however, inevitably

The compensation of the syndicate and its managers may consist of at least three different emoluments. It will be able to buy the new first or general mortgage bonds for less than the true market value, usually a discount of about 5 per cent. It will receive in addition a reasonable rate of interest and a commission on the actual money advanced during the reorganization.[44] It will also receive a considerable bonus in the form of new preferred[45]

lead to one banker or syndicate taking the lead, and analysis of the case will usually develop the fact that one of the bankers or syndicates is acting under the direction of the other.

[43] The Baltimore and Ohio Railroad reorganization of 1898 had a composite agreement of this character illustrative of the somewhat elaborate arrangements entered into between the general reorganization committee, acting for the new corporation, and the syndicate of bankers.

The syndicate agreed:

1. Guaranteed subscription to \$6,975,000 new preferred stock and \$30,250,000 new common stock, to be offered to the old first preferred, second preferred and common stockholders.
2. Agreed to purchase \$9,000,000 prior lien 3½'s, due 1925; \$12,450,000 first (general) mortgage 4's, due 1948; \$16,450,000 4 per cent preferred stock.
3. Agreed "to protect the new company in the ownership and possession" of the property covered by its mortgages, by acquiring the old bonds, at par, from those who would not care to refund them into new bonds. The syndicate agreed to exchange such acquired old bonds for the corresponding amounts of new bonds specified in the plan.
4. Agreed to purchase \$3,800,000 par value of Western Union Telegraph Company stock at \$90 a share.—See *Chronicle,* vol. 66 (1898), p. 1,235; also Daggett, *Railroad Reorganization,* pp. 24 and 346.

[44] Sometimes—and the practice is growing quite common—the underwriting syndicate arranges with another syndicate of bankers to advance the necessary money. In the St. Louis and San Francisco reorganization of 1916, the ordinary underwriting syndicate, called in this case the Purchase Syndicate because it purchased outright a large block of prior lien bonds, made arrangements with the Loan Syndicate to carry its bonds. The compensation of the former was 4 per cent of the par value of the bonds, and of the latter approximately 2¾ per cent, both commissions being paid out of the assessments on the stockholders.

In the Pere Marquette reorganization of 1917 the Purchase Syndicate received a commission of 5 per cent on its entire obligation, out of which it compensated the Guaranty Trust Company of New York, which formed a Loan Syndicate, to carry the entire obligation of the Purchase Syndicate on a 20 per cent margin. The use of two syndicates, one to carry the risk and the other to advance the capital, seems to be growing in frequency.

[45] The syndicate which stood back of the Union Pacific reorganization received for its services \$5,000,000 in preferred stock (valued at about 60 per cent) and the managing bankers \$1,000,000. (Daggett, *Railroad Reorganizations,* p. 253.) Such allotments of preferred stock are rare. Distinctly, the

or common stock,[46] or both. In addition, still, the rights of the non-assenting stockholders, which revert to the syndicate, may be looked upon as a fourth kind of compensation.[47] In general, the net amount of the special discount on the bonds and the commission on the money advanced may be looked upon as approximately equal to the direct and indirect expenses incurred by the syndicate. A profit can arise only through the development of a substantial value for the stocks received as a bonus. This can occur only if the reorganized company is a success. Obviously, therefore, the members of the underwriting syndicate must assume an active interest and directly coöperate in the future welfare of the road. This interest must, for selfish reasons alone, continue long after the reorganization plan has been consummated. Taking into account the risks both of money and business reputation which a reorganization syndicate assumes, the compensations given of late years are not exorbitant. They are, comparatively speaking, less than what affiliated bankers demand for the sale of the securities of solvent corporations, when the chance of loss is negligible; they are less, comparatively, than what receivers are accustomed to demand for purely nominal responsibilities involving no permanent risks.[48]

ARTHUR S. DEWING.

commonest form of bonus is a liberal issue of common stock alone without any preferred stock or bonds.

46 J. P. Morgan's banking house received $750,000 in common stock of the new Southern Railroad for the most difficult of Mr. Morgan's reorganizations. The stock had, at the time, little value.

47 In rare instances, the terms offered to purchase outright new securities are less favorable than those offered the old security holders directly. Thus, in the small, but notably unfortunate, Gulf, Florida and Alabama case the old bondholders were allowed to purchase, for $250 in money, $500 in prior lien bonds and $250 in second lien and common stock; whereas the syndicate members were given, for the same money price, $400 in the prior lien bonds and $150 in each of the junior securities.

48 For other discussions of the reorganization syndicate see Joline, *Reorganizations of Corporations*, p. 56; Daggett, *Railroad Reorganization*, p. 345; Meade, "The Reorganization of Railroads," *An. Am. Acad. Pol. Soc. Sci.*, vol. 17 (1901), p. 205.

COMMUNICATION

A further communication has been received from Mr. D. J. Tinnes, Hunter, N. D., in continuation of the discussion of definitions, which may be found on pages 335 and 585 of volume VIII (1918) of this Review.

Experimental Definitions

Wantedness, the quality of being wanted.

Not only is the term *utility* ambiguous, but the definitions commonly given it, "capable of satisfying a human want" and "must satisfy some human desire," seem hardly exact. For, surely, *wantedness,* rather than either *wantableness* or *attained satisfaction,* is the *demand* factor in *valure. Net wantedness* is marginal utility.

Valure, trade-efficience or trade-worth (worth in trade), value in the economic sense.

The revival, for this restricted use, of the obsolete form *valure* will relieve an overworked term and make discussions of this subject clearer to the average reader. Derivatives: valural, valurable, valurate, valuration. *Purchasing power of money* is good, although *general* purchasing power may be taken to mean purchasing power *everywhere,* rather than purchasing power over all commodities. But *purchasing power* of a *commodity,* as signifying trade-efficience, not price, is less clear. Valure equally fits both uses.

Price, valure expressed in terms of money.

Valurat (a correct form but no better than the less dignified *val*), a movable thing having valure.

This definition excludes land, labor, and professional and personal services.

Money or Cash, currency issued by or authorized by the government.

This, with government paper and coins, takes in national bank notes.

Currency, money plus deposit currency.

It seems absurd not to reckon as currency the freely circulating bank drafts and checks (money of private issue based on deposits), in which nine-tenths of the business of the country is transacted.

Trade-Credits, all credits used as media of exchange, including book entries and all written and oral and even tacit agreements to pay in currency or in goods at currency prices.

It matters little whether trade credits are considered as augmenting the quantity or as increasing the turnover of currency. It seems simpler to view them as added quantity. For credit transactions are in no greater degree turnover of the paper currency in which they are reckoned than are trades effected with currency added turnover of the gold it represents. In gaging *valure* both equally represent the gold, yet the acceptability of neither is wholly derived therefrom.

D. J. Tinnes.

General Works, Theory and Its History

Instincts in Industry. A Study of Working-Class Psychology. By ORDWAY TEAD. (Boston: Houghton Mifflin Company. 1918. Pp. xv, 221. $1.40.)

Creative Impulse in Industry. By HELEN MAROT. (New York: E. P. Dutton and Company. 1918. Pp. xxii, 143. $1.50.)

It is necessary to keep in mind, in reading his book on *Instincts in Industry*, that Mr. Tead expressly disclaims precise classification of instincts. Nor does he assume that "the promptings of instinct offer a safe guide to conduct" (p. 6). He keeps in mind the need of experiment in trying out and testing the suggestions which he and others make as to the real importance of specified instincts (*e.g.*, p. 56). What he intends to do is simply to show by "a varied collection of facts, incidents, and anecdotes, that human conduct tends to become not only more intelligible but more amenable to control as we view it in the light of an understanding of the instinctive mainsprings of action" (p. ix).

These cautions are to be observed, because as Mr. Tead goes along in his discussion, it is seen that his starting point is the Freudian doctrine of explosion of the sex instinct when it has been suppressed, but he enlarges it into the explosion of other suppressed instincts. Furthermore, we know that from the time of Fourier anarchistic and socialistic doctrines have been based on the expected harmony that will follow the liberation of suppressed passions. Tead gives great weight to these doctrines of suppression and explosion, and indeed seems at times to overlook the equally important doctrines of necessary repression and control. It would be well if he would follow up this work by similar anecdotes and illustrations of the useful part played by the capitalist system in the line of discipline, management, control, and fulfilment of duty, promises, and agreements, even though by way of coercion. Something of this kind is needed to offset the chimerical conclusions likely to be drawn by those who see in that system only suppression and explosion and not the equally important discipline, obligation, credit, and good faith without which modern industry collapses altogether. I realize that what he is after is to suggest experiments towards obtaining a just balance between these two qualities of the capitalist system, but having left the latter half of the system undeveloped, the conclusions that might

be drawn seem to support schemes that experiments have already shown to be fatuous.

This, I take it, is the defect of Miss Marot's book. She starts with one of the so-called instincts, the instinct of workmanship. Then she has a plan for liberating it. Her plan is to start a kind of productive coöperation controlled by workmen, wherein they will be partners in the management, and thus will take part in the planning and so get vent for their instinct of workmanship. Robert Owen experimented with that plan a long time ago, and there were several Fourieristic experiments, and the history of coöperation is strewn with the wrecks of labor's participation in management. The capitalist system has evolved and survived out of experiments and in spite of continuous protests and opposition. And, I take it, one reason is that it is a system of repression of natural instincts, a system of discipline, regimentation, submission to foremen, superintendents, executives, over whom the employees have little or no control. Quite dependent on this is the fact that it is a system based on credit and the payment of debts, a system which could not be maintained if the workers had the power to pay to themselves the total product of their labor in present wages—a power which they always are inclined, even forced, to exercise by reason of their immediate necessities—instead of paying for upkeep and extensions out of present product. It is the business of management to sustain the credit system by restraining the instincts of labor.

Nevertheless, if capital and management overlook the suppression and explosion that Tead describes, the system will probably break down, and there are evidences that it is breaking down for this reason. Employers are losing their power of discipline, and the live question is, how are they going to retain enough of it to maintain the system. It is here that Tead's book ought to be of great value to capitalists, to engineers, scientific managers, executives and those who are inclined to sit on the lid. If they read it with due appreciation that it is an effort of one who has first-hand knowledge to help them arrange their thoughts and to try out experiments along really scientific lines, it will do them and the nation good in the doubtful times ahead. Tead definitely avoids conclusions that "pure instinct is ever in the saddle" (p. 9) and his definition of instinct as a born-disposition that is both variable and adaptive, permits him, through reference to imitation and habit, to combine the instincts in whatever arrangement seems

called for by his illustrations. The main object is to explain the activities and attitudes of manual workers without bringing in their reason or intellect. This is a considerable step in advance of the "calculating hedonism" of the classical and Austro-American economists, and if followed out in economic theory, it evidently shifts the crux of the subject from an abstract, subjective pleasure-pain psychology over to that point where psychology meets both jurisprudence and economics. Each is a theory of behavior-psychology, a theory of will-in-action; jurisprudence, of liberty and power to act; and economics, of action under conditions of limited opportunities to act.

It is this that gives significance to Tead's chapter on the "instinct of possession." For he finds that this instinct is not the hoarding instinct of squirrels and bees (p. 84) but the far more complex "sense of property right in jobs" (p. 70). In fact, taking his book as a whole, this is his central idea, clouded, however, by his concessions to the behavioristic psychologists who insist on pigeon-holing behavior according to the merely animal instincts. He recognizes that this cannot be done (pp. xii, xiii) and that all of the instincts are but expressions of the "instinct of self-preservation"— the "imperious will to live" (p. 18). This, in so far as it connects up with modern industry, is the "sense of property right in jobs," for the right to a job is not "physical or real property" (p. 67). It is a claim to a recognized position in that highly complex system of modern behavior, partaking of psychology, law, and economics, which we call "business."

When we analyze his various instincts, which are strictly instincts as found *in industry*, they focus around this sense of property right in jobs. Take his "instinct of workmanship." He describes it as "a delight in creation, or at least in activity to which some use is imputed." This "contriving impulse seems normally to manifest itself in conjunction with the possessive instinct." It may be, he says, that "the thwarting of the sense of proprietorship explains why the workmanly tendencies are not more active," etc. (p. 44). Likewise his "instinct of self-assertion." "In the money-economy under which we live . . . a situation has been created in which people desire to possess, not to satisfy so much the possessive as the self-assertive impulse" (p. 85). Also the "instinct of self-submission." "Many people seem to derive a downright pleasure from being bossed" (p. 113). Yet if this instinct is born of "fear" rather than "admiration" (p. 114) it is liable to end in

an explosion on the job (p. 129). Again, the "sex instinct," "the classic truth that woman's beauty arouses the interest and attention of man, is capitalized in business in all sorts of ways" (p. 36). The "parental instinct"—"those who marry and have children, or those who intend to marry, are declaring in one way or another an imperious determination to provide decently for their own" (p. 33). "Pugnacity is provoked by assertion of claims to jobs." Lastly, the "instinct of curiosity." It seems to be "the function of thought" (p. 200), "the human being's native desire to be intellectual master of his fate." It underlies ambition, promotion in jobs, class consciousness, wage consciousness and similar collective claims to jobs.

Centering, as these instincts do, in his mind, around the perfect instinct, or the undifferentiated instinct of self-preservation, I believe Tead's practical conclusions would come with more weight if the whole arrangement of his book had been centered around that instinct. As it is, we have unorganized anecdotes and illustrations, leading up to rather commonplace conclusions, such as, "human nature is knowable, subject to law, controllable, and needs a considerable measure of democracy and self direction" (p. 220).

Apart from the coöperative experiment which she proposes, Miss Marot's book is a notable product of the recent unrest in industry, education, and organized labor. Her "creative impulse" is not exactly an instinct but a result of education, and both industry and our school system suppress it. She surveys education from the standpoint of John Dewey, industry from the standpoint of Robert Wolf, and organized labor from the standpoint of control of the shop. "The creative process is the educative process, or, as Professor Dewey states it, the educative process is the process of growth" (p. xxi). "It is beginning to be understood," says Wolf, "that when we deny to vast numbers of individuals the opportunity to do creative work, we are violating a great universal law" (p. 39).

The labor movement heretofore has been a business movement (p. 10). The object has been financial, that is, getting wealth by "capture," not by work (p. 14). In so far as possible, both capital and organized labor have "exploited wealth" rather than produced it (p. 63). Miss Marot finds traces of a new motive. "The syndicalism of France has expressed the workers' interest in production as the labor movements of other countries have laid stress exclusively on its economic value to them" (p. 10). Next, the

"shop stewards'" movement of England "is essentially an effort of the men in the workshops to assume responsibility in industrial reconstruction after the war, a responsibility which they have heretofore under all circumstances delegated to representatives not connected directly with the work in the shops" (p. 62).

It is in the revolt of organized labor against their trade-union leaders, the revolt of socialists against the "bureaucratic schemes of state socialism, the revolt against the "autocratic method of business management," all of them signifying effort of workers in the shop to get control of the shop, that Miss Marot finds the urge of the creative impulse in the workers themselves. It is not merely an effort, as has been supposed, to get more wages or get control of the jobs; it is an effort, or at least the unwitting first push of an effort, to get back to the spirit of craftsmanship and workmanship. In order that workers may have an interest in their work they must have responsibility in its planning. "For this reason we need to develop the opportunity as well as the desire for responsibility among the common people" (p. 67).

Miss Marot has furnished many persuasive facts and arguments to sustain her proposition. She has, moreover, worked out a scheme for its practical application. But the scheme impresses me far more as a suggestive plan to be taken up and experimented on by employment managers and labor departments in factories than as a plan to be launched independently. Business, of course, has to be made financially successful, and that requires salesmanship as well as the creative impulse of the workers. The labor revolt that she emphasizes is compelling capitalists to pay attention to this very defect in industry and to separate labor management from engineering, salesmanship and finance. Welfare schemes have been their first approach, then scientific management. These fall short of meeting the workers half way, and Miss Marot's book sets forth the next line of experiments which, it seems certain, they must make not only in industry and education but also in the organization of labor.

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L'Economie Politique et les Economistes. By GUSTAVE SCHELLE. Encyclopédie Scientifique, published under the direction of DR. TOULOUSE. (Paris: Doin et Fils. 1917. Pp. xviii, 396. 6 fr.)

The author endeavors to present in outline a sketch of the na-

ture and history of economic thought. He proceeds from a point of view of the French Liberal School; defines economics as the science of exchanges; and goes pretty far toward stating that economics, as a science, began and ended with J. B. Say. At the end of that writer's work, M. Schelle states, most of the consequences of the law of supply and demand had been illuminated, and economists were in accord as to the nature of value and as to the distinction between value and utility. Say, too, had demonstrated that immaterial products are not different, from the point of view of economics, from material products; and he had established the theory of markets, thus placing upon a permanent basis the doctrine of freedom of exchange. "All that which concerns the formation of capital, revenues, and profits; role of money, both metallic and credit; taxation; and consumption of wealth, formed a whole to which in the future it would be possible to add only details. The distribution of wealth alone contains problems which might trouble the economist" (p. 182).

One's first impression upon glancing through the book is the lack of balance in the treatment of the different authors. In reality, the book should be called A History of Political Economy in France, with Notes on Foreign Influences. German economists are conspicuous by their absence. For example, hardly a page is given to the German Historical School, which is dismissed as being founded on a confusion between the science and art; nor do the leaders of English economic thought fare much better. Ricardo receives somewhat cavalier treatment in three pages; Cairnes is not referred to; and Jevons is barely mentioned as a statistician, and as a member of the "socialists of the chair"! The reviewer finds no mention of Francis A. Walker, Von Wieser, or L. Cossa. The bibliography consists entirely of French works, with one exception, which has been translated into French from Italian.

A characteristic of French economic thought is noticeable in the shape of the large amount of attention paid to socialism. Approximately 110 pages are devoted to various lines of socialist thought. Indeed, the classification of socialist tendencies is of some interest, embracing the utopists (More to Brissot); sentimental socialism (St. Simon, Fourier, and others); pseudo-scientific (Marx), etc.; political socialism (solidarism, interventionism, coöperation, etc.); and "l'étatisme" (public ownership). The author goes too far in confusing socialism of the chair with Marxian socialism, and shows his lack of understanding of the

subject by only mentioning, as members of the school, Wagner, Jevons, and Laveleye.

The discussion of the physiocrats and Turgot (to whom a separate chapter is given) will be found one of the most useful parts of the book. Other noteworthy, though questionable, features are the separate chapters on mercantilism, Colbertism, and the "law-of-nature economists"; and the chapter on positivists, treating of Comte, "Stuart Mill," and Herbert Spencer. There is a short chapter on the history of statistics.

The book contributes little if any that is new, but is interesting for its method of presentation and point of view.

LEWIS H. HANEY.

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NEW BOOKS

BROWN, J. F. *New era economics; presenting a rational theory of value.* (Indianapolis: The author, 529 E. New York St. 1918. Pp. 184. $1.)

CARVER, T. N. *Principles of political economy.* (Boston: Ginn. 1918. Pp. 588. $1.96.)

To be reviewed.

COLSON, C. *Cours d'économie politique.* (Paris: Gauthier-Villars. Pp. 547; 531; 456. 1915; 1917; 1918.)

The first volume is devoted to economic theories; the second, to the movement of population, employment conditions, and social legislation; and the third includes an inventory of the wealth of France before the war as compared with England and Germany, also an estimate of the cost of the war.

DETILLIEUX, A. *La philosophie sociale de M. Ernest Solvay.* (Paris: L. Lebègue et Cie. 1918. 1.50 fr.)

GIDE, C. *Cours d'économie politique.* Fourth edition, revised. (Paris: Tenin. 1919. 12.50 fr.)

HETHERINGTON, H. J., and MUIRHEAD, J. H. *Social purpose; a contribution to a philosophy of civic society.* (New York: Macmillan. 1918. Pp. 317. $3.50.)

KIEKHOFER, W. H. *An outline of the elements of economics.* Second edition, revised. (Madison: Dept. of Economics, Univ. Wisconsin. 1918. Pp. 142.)

SEGAL, H. *The law of struggle.* (New York: Massada Pub. Co. 1918. Pp. 161. $1.50.)

The author of this volume, like so many other philosophers, attempts to interpret all things in the terms of a single word or phrase, this time in the terms of pain and struggle. In the chapter

on The Economic Struggle, a system of privately owned and state regulated monopolies together with profit-sharing is advocated.

G. L. A.

Springer, L. *Some aspects of financial and commercial after-war conditions.* (London: King. 1919. 2s. 6d.)

Thompson, C. M. and Hunter, M. H. *Exercises and problems in economics.* (Chicago: Sanborn. 1919. Pp. 87.)

Prepared for use with Thompson's *Elementary Economics.* The exercises and problems are divided into three groups. Group A calls for knowledge of textbook facts; group B for investigation and observation; group C requires simple, deductive reasoning.

Travers-Borgstroem, A. *Mutualism, a synthesis.* (Switzerland: Clarens. 1918. Pp. 76.)

Turner, J. R. *Introduction to economics.* (New York: Scribners. 1919.)

Economic History and Geography

Readings in Industrial Society. A Study in the Structure and Functioning of Modern Economic Organization. By Leon Carroll Marshall. (Chicago: University of Chicago Press. 1918. Pp. xxiv, 1082. $3.50.)

Professor Marshall's book of readings is a bulky volume of nearly 1100 closely printed pages. The first 221 of these are devoted to providing a "historical background" for the "outstanding features of modern industrial society," which are taken up in the remaining pages. The book is one of the Chicago "case book" series, which series differs from the Harvard group of case books in that the method is to present a multitude of small fragments, grouped under certain main heads. On the whole it may be said that the numerous subjects covered are brought before the reader with a recognition of their social significance, and with the idea of a social appraisal. The book ends with a long chapter on Social Control. In the reviewer's opinion, however, there is a slant towards optimism.

Professor Marshall's work has been very well done. There are not a few shortcomings, but these are chiefly inherent in the method. In fact, the reviewer is very doubtful whether such books of readings as this are worth while. The small fragments torn out of their settings in numerous works are so difficult to coördinate, and each is necessarily so unfinal, that it is almost an impossible task to weave them into a real whole. (An index would have helped.) Moreover, there is a necessary tendency to lead the

reader to regard the book as covering the whole field, for such a purpose is apparent. Nevertheless in the present work there is practically nothing on transportation and communication, on agriculture, or on trade union organization and policy. Also the great number of short quotations on the same subject leads one to expect that all sides of the subject will be presented. As a matter of fact, one finds that on the moot point of maintenance of resale prices, the present work gives quotations from a paper by Professor Cherington and an argument by the National Chamber of Commerce, both advocates of the system. Also what seems to the reviewer the erroneous inclusion of "price agreements," under the head of Pools, by Dr. W. H. S. Stevens, is inserted without modification.

Doubtless it would be impossible to prepare a work like this to which someone would not object that certain authors had been quoted who were relatively unimportant; and that others more important had been omitted. Nevertheless, the reviewer would ask why Professor Marshall quotes from W. H. Hamilton on such subjects as Business Cycles, The Case for Private Property, Role of Money, and The Industrial Revolution? Why F. M. Taylor on Stock Exchanges? Why *only* J. B. Clark and J. M. Clark on the functions of the Entrepreneur? Why is no reference made to the Johns Hopkins University studies in trade unionism? Why no adequate utilization of the reports made by the Bureau of Corporations and the Federal Trade Commission? Why no quotation giving Walker's theory of profits? Why no quotations from Mill and Jevons under the head of The Relation of Government to Industrial Activity?

Perhaps these queries but reflect the necessary weaknesses of a book of this sort. In any event it should be noted that there are many interesting fragments contained therein; *e.g.*, some from H. C. Adams, Carver, Seligman, Hobson, the Industrial Commission, and others.

The book will be useful to the economist who desires to look up a given point. No doubt the plan has been found workable at the University of Chicago; but it has been the reviewer's experience, as a teacher, that the selections are too fragmentary to be useful as outside readings.

Such works remind one of the quick lunch counter or cafeteria. An attractive, though somewhat motley, arrangement of dishes is displayed; but the meal is not of the most pleasant or nourish-

ing kind, and one arises from it with a feeling of dissatisfaction and a longing for a "regular" meal.

LEWIS H. HANEY.

NEW BOOKS

ABBOTT, E. *Democracy and social progress in England.* (Chicago: Univ. Chicago Press. 1918. Pp. 17.)

BACHI, R. *L'Italia economica nel 1917. Le ripercussioni della guerra mondiale ed italiana sull' economia nazionale.* (Turin: La Riforma Sociale. 1918. Pp. xvi, 312.)

BARRON, C. W. *War finance as viewed from the roof of the world in Switzerland.* (Boston: Houghton Mifflin. 1919. Pp. xii, 368. $1.50.)

This volume is based upon a three months' personal visit of investigation in England, France, and Switzerland in the summer of 1918. From a previous study the author found the same problems of interrelated war and finance in Mexico as in Europe. He now sees the "international unfolding of the larger problem of brotherhood of man—brotherhood in war and in peace, brotherhood in trade and in finance." Letter 12 deals with costs of war and indemnification; letter 14 with American railroads in France; letter 22 with taxes and injustice; letter 34 with free trade and protection. The volume is stimulating and contains a great variety of first-hand data. It stresses interdependence in national problems.

BEVAN, E. *German social democracy during the war.* (London: Allen. 1918. Pp. 280.)

BOND, B. W., JR. *The quit-rent system in the American colonies.* (New Haven: Yale Univ. Press. 1919. $3.)

CALHOUN, A. W. *A social history of the American family from colonial times to the present.* Vol. III. *Since the Civil War.* (Cleveland: Arthur H. Clark Co. 1919. Pp. 332; 411. $5.)

This final volume of Dr. Calhoun's study deals with the American family in the last half century and discusses such matters as the changed social conditions in the South, the revolution in woman's world, alterations in home life, race sterility and race suicide, divorce, and attitude of the church.

Dr. Calhoun considers that urban industrialism is the one fundamental economic fact that has shaped the evolution of the American family since the Civil War, and that it is the taproot of the evils undermining the home and family. He shows how the relentless workings of the profit system develop a far-reaching pathology of their own which has a demoralizing influence on rich and poor, on city and country. Such problems as child labor, congested tenement and alley life, the social backwardness of the negro, are "a part of the larger problem of the capitalist system," and must wait for their elimination "on the attainment of economic leeway." In con-

nection with bad housing conditions, the author observes that current capitalism seems willing to try the experiment of a civilization without homes (p. 75), though people can neither be moral nor healthy until they have decent homes. Individuals not families are now the units of society; and the only way to reintegrate the family (if it is possible) is by readjusting our economic system, by abolishing economic exploitation (p. 274). But this is the dark side of the picture. Equal emphasis is placed on the social gains of the last fifty years, particularly in regard to the position of women and the care of children.

Dr. Calhoun believes the indications are that society is working toward socialism, not as a final goal but as the next stage in social evolution (p. 326), and that the promise of American life is a new family "based on the conservation and scientific administration of limited natural resources, on the social ownership of the instrumentalities of economic production and the universal enjoyments of the fruits, and on a social democracy devoid of artificial stratification based on economic exploitation" (p. 332).

The book contains considerable economic data regarding housing conditions, child labor, and women in industry.

AMELIA C. FORD.

COGHLAN, T. A. *Labor and industry in Australia; from the first settlement in 1788 to the establishment of the commonwealth in 1901.* Four volumes. (New York: Oxford Univ. Press. 1918. Pp. 2450. $33.)

DORGAN, M. B. *Lawrence, yesterday and to-day (1845-1918).* (Lawrence, Mass.: M. B. Dorgan, City Hall. 1918. Pp. 263. $1.50.)

FISHER, E. F. *Resources and industries of the United States.* (Boston: Ginn. 1918. Pp. 246. 80c.)

GANNON, F. A. *The ways of a worker of a century ago as shown by the diary of Joseph Lye, shoemaker.* (Salem, Mass.: Newcomb & Gauss. 1918. 25c.)

HARLOW, R. V. *Economic conditions in Massachusetts during the Civil War.* Publications of the Colonial Society of Massachusetts, vol. XX. (Boston: The author, Simmons College. 1918.)

HIMES, C. F. *Life and times of Judge Thomas Cooper.* (Carlisle, Pa.: The author. Pp. 70.)

HOBSON, J. A. *Richard Cobden; the international man.* (New York: Holt. 1919. Pp. 416. 5s.)

HOFFMAN, F. L. *Autocracy and paternalism vs. democracy and liberty. An address delivered at the annual meeting of the International Association of Casualty and Surety Underwriters, December 4, 1918.* (Newark, N. J.: The author, Prudential Ins. Co. 1918. Pp. 32.)

HOPKINSON, A. *Rebuilding Britain; a survey of problems of reconstruction after the world war.* (London: Cassell. 1918. Pp. 186.)

Huntington, E. *World-power and evolution.* (New Haven: Yale Univ. Press. 1919. Pp. 287. $2.50.)

Jauréguy, P. *L'industrie allemande et la guerre.* (Paris: Dunod & Pinat. Pp. 160).

Lippincott, I. *Problems of reconstruction.* (New York: Macmillan. 1919. Pp. 340. $1.60.)

McKitrick, R. *The public land system of Texas, 1823-1910.* University of Wisconsin, bull. no. 905. Economics and political science series, vol. 9, no. 1. (Madison: Univ. Wisconsin. 1918. Pp. 172. 25c.)

Munro, W. B. *The government of the United States, national, state, and local.* (New York: Macmillan. 1919. Pp. x, 648. $2.75.)

Contains chapters on the taxing power (pp. 219-232); the borrowing power, the national debt, and the national banking system (pp. 233-245); the power to regulate commerce (pp. 246-264); the workings of congressional government, with special reference to congressional finance (pp. 299-311); and state finance (pp. 460-472).

Overlach, T. W. *Foreign financial control in China.* (New York: Macmillan. 1919. Pp. ix, xiii, 295. $2.)

To be reviewed.

Parkins, A. E. *The historical geography of Detroit.* University series, III. (Lansing: Michigan Historical Commission. 1918. Pp. xix, 356.)

Peddie, J. T. *Economic reconstruction.* (New York: Longmans. 1918. Pp. vii, 242. 6s. 6d.)

Reckitt, M. B. and Bechoffer, C. E. *The meaning of national guilds.* (New York: Macmillan. 1919.)

Reese, A. M. *Economic zoölogy.* (Philadelphia: P. Blakiston's Son & Co. 1919. Pp. xvii, 316.)

Riu y Periquet, D. *Anuario financiero y de Sociedades anónimas de Espana.* (Madrid: Imprenta Sáez. 1918. Pp. 791. 13 p.)

Ruiz Moreno, I. *El impuesto sobre la renta. Su aplicación en la República argentina.* (Buenos-Aires: Rosso. 1918. Pp. 79.)

Samuel, A. M. *The herring, its effect on the history of Britain.* (London: Murray. 1918. Pp. xx, 199.)

Schafer, J. *A history of the Pacific Northwest.* (New York: Macmillan. 1918. Pp. 323.)

First published in 1905. Contains chapters on the fur trade on the Columbia, the Hudson Bay Company, the age of railways, the progress of agriculture, and industry and commerce.

Shortt, A. and Rowe, L. S. *Early economic effects of the European war upon Canada. Early effects of the European war upon the*

finance, commerce and industry of Chile. (New York: Oxford Univ. Press. 1918. Pp. xvi, 101. $1.)

SPRINGER, L. *Some aspects of financial and commercial after-war conditions.* (London: King. 1918. 2s. 6d.)

TREXLER, H. A. *Flour and wheat in the Montana gold camps, 1862-1870: a chapter in pioneer experiences and a brief discussion of the economy of Montana in the mining days.* (Missoula, Mont.: Dunstan Prtg. Co. Pp. 20.)

WERNER, C. J. *A history and description of the manufacture and mining of salt in New York State.* (Huntington, N. Y.: The author. 1919. Pp. 144.)

WITHERS, H. *The league of nations; its economic aspect.* (New York: Oxford Univ. 1918. Pp. 16. 12c.)

The American year book; a record of events and progress, 1918. Edited by F. G. WICKWARE. (New York: Appleton. 1919. Pp. 850. $3.50.)

The following chapters are included: XII, Economic conditions and the conduct of business, by S. S. Huebner; Economics, by W. C. Mitchell. XIII, Public finance, banking, and insurance, by C. C. Williamson, Ray B. Westerfield, W. M. Strong, and S. S. Huebner. XIV, Social and economic problems: Sociology, by H. N. Shenton; Social work and the war, by W. T. Cross; Recreation, by H. P. Moore; Child welfare, by L. A. Thompson; Social hygiene, by W. Clark; Criminology and penology, by E. R. Cass; The liquor problem, by J. Koren; Socialism, by C. D. Thompson; Vocational education and guidance, by A. R. Dean; Unemployment, by J. B. Andrews; XV, Labor and labor legislation, by J. B. and I. O. Andrews. XIX, Trade, transportation and communication, by G. G. Huebner and R. Riegel.

Anuario technico e industrial de Espana. (Madrid: Imp. de Antonio Marzo. 1918.)

L'avenir de l'expansion économique de la France. (Paris: Giard & Brière. 1918. 14 fr.)

Canada's war effort, 1914-1918. (Ottawa: Director of Public Information. 1918. Pp. 31.)

A catalogue of French economic documents from the sixteenth, seventeenth, and eighteenth centuries. (Chicago: The John Crerar Library. 1918. Pp. 8, 104. 20c.)

The Garton Foundation memorandum on the industrial situation after the war. Revised and enlarged edition. (London: Harrison & Sons. 1919. 2s.)

List of references on reconstruction. Reference circular no. 5. (Indianapolis: Indiana State Library. Pp. 17.)

Memorandum on the industrial situation after the war. (Philadelphia:

U.S. Shipping Board Emergency Fleet Corporation. 1919. Pp. 76.)

Problems of industrial readjustment in the United States. Research report no. 15. (Boston: National Industrial Conference Board. 1919. Pp. 58. $1.)

Reconstruction programs: a bibliography and digest. Reconstruction series, bull. no. 2. (New York: Joint Commission on Social Service of the Protestant Episcopal Church. 1919. Pp. 20.)

Report of the Indian Industrial Commission under the chairmanship of Sir Thomas Holland, K.C.S.I. (Madras: G. A. Natesan Co. 1919. Pp. 272. 1 rupee.)

St. Louis after the war. (St. Louis: City Plan Commission. 1918. Pp. 31.)

Taking stock of the future. Outlines of the plans of various foreign countries for commercial reconstruction. (New York: Guaranty Trust Co. 1918. Pp. 162.)

Agriculture, Mining, Forestry, and Fisheries

The Food Crisis and Americanism. By William Stull. (New York: The Macmillan Company. 1919. Pp. viii, 135. $1.25.)

The author, so we are informed in the preface, went from the farm to a four-years' course in "one of the best agricultural universities, specializing in mathematics and agricultural chemistry," thence (apparently about 1878) to a position as representative of a farm mortgage company, and has followed this work ever since. He may therefore be expected to speak *ex cathedra* upon the ills of the American farmer. He believes that "the most serious and one of the most pressing questions of today is: What is the matter with American agriculture, that it is breaking down at the most critical period in the nation's history?" And to this question he replies: "Labor and marketing conditions are responsible for the present deplorable situation. These have grown out of the two basic evils: the one, that we have exalted idleness; the other, that we, as a people, have become over-commercialized." As a matter of fact, the author explores a much wider field of causation than that indicated in the quotation, but does not go very deeply into even the main points of this indictment.

It is asserted that our system of education "engenders an indifference to, if not a contempt for, labor—or at least a feeling that manual labor is very disagreeable, if not degrading." This is linked with the inordinate wages of union labor, to explain a

fatal shortage of farm help. The remedy suggested is that organized labor abandon the eight-hour day and that we set aside or at least mitigate our Chinese exclusion laws. The first "would release one in five of the number [of industrial workers] to be employed in agriculture, or to take the place of those less skilled, who would in turn be released for farm labor. . . . One Chinaman added to the present force on each farm would, at the end of the second year, add 25 per cent to 40 per cent to the present output, and soon increase this to 100 per cent." While these steps are urged as war measures (the book, though published in February, 1919, retains unaltered the point of view of July, 1918, when the preface was written), there is nothing to soften the implication that these measures would be effective in their action and proportionately desirable for the meeting of any less exigent food crisis of peace times. Next the Food Administration (Mr. Hoover excepted) is criticized for following a course which has forced on the producer "a constant loss, since November 1, 1917, averaging over 20 per cent on all hogs sold," and at least nearly equal injustice to the cattleman. Following this, a few bitter words on the public land policy serve to preface a sweeping denunciation of the federal land banks.

It might seem, now that the author is upon his own ground, that we should have more detailed analysis of the issue involved. However, only ten pages are devoted to this discussion and the argument confines itself to generalities and is extremely biased in its character. The main point is that the farm mortgage companies were given practically no part in the framing of the law, that the business can be handled much more cheaply by private agencies, and that it should be turned back to them at the earliest possible moment. "One's head swims," says the author, "when he attempts to compute the amount of this unnecessary burden, when, as they anticipate, the federal land banks shall have placed upon its books $4,000,000,000 in farm mortgages." The reader can hardly avoid the feeling, as he notes the amazing statements in this discussion, that the author's head did, in truth, swim as he wrote.

The remainder of the book deals with the birth of class consciousness among American farmers, their increasing poverty and mortgage indebtedness, the evils of land speculation, the lack of adequate crop news, the need of developing water transportation, and the sins of the railroads, the packers, and other monopolies, with lengthy *obiter dicta* upon theories of soil fertility and the short-comings of the Federal Bureau of Soils.

There is sound wisdom in the fundamental idea which lies back of this book. It seeks to point out the lack of intelligent and sympathetic interest on the part of the public and of legislatures with reference to our great fundamental industry, agriculture. That the author himself is intelligent and sympathetic with regard to the farmer's needs, at times seems somewhat doubtful when we find him scouting the idea that there has been any scarcity of capital available for the farmer and when we find him advocating a plan by which the farm worker will be thrown into competition with the lowest grades of coolie and other immigrant labor. Throughout, the author proves too much; his attitude toward facts is far from scholarly, and his handling of figures is at best extremely reckless. What, for example, is the truth back of the assertion "it has for years been utterly impossible to secure more than half the necessary farm labor at any price" or "the chief opposition to Chinese labor comes from 'idlers' and organized labor" or "the farmers have received no profit on hog-feeding during the war" or "in no country in Europe, during the last two decades, have the farmers received so little for their produce and the consumer paid so much for their foodstuffs as in this country." Assuredly we need and would welcome a careful and authentic study of any one of the issues raised in this small volume, particularly that dealing with the agricultural labor supply and its efficient use, or with the actual results of food control, or the present status of rural mortgage credit. But a brief discursive treatment of a wide range of these problems within so small a compass and by one not particularly qualified for the task merely muddies the waters of a pool that was already turbid enough.

E. G. Nourse.

Iowa State College.

NEW BOOKS

Arnold, J. H. *A study of farming in southwestern Kentucky.* (Washington: Dept. Agriculture. 1918. Pp. 19.)

Bosworth, G. F. *Agriculture and the land.* (Cambridge, Eng.: University Press. 1917. Pp. vii, 93.)

Brooke, W. E., editor. *The agricultural papers of George Washington.* Studies in American history. (Boston: Badger. 1919. Pp. 145. $1.50.)

Christie, G. I. *Finding labor to harvest the food crops.* (Washington: Dept. Agriculture. 1918. Pp. 8.)

Coffey, W. C. *Productive sheep husbandry.* (Philadelphia: Lippincott. 1918. Pp. x, 479.)

Escard, J. *L'aluminium dans l'industrie. Métal pur, alliages d'aluminium.* (Paris: Dunod & Pinat. 1918.)

Harder, E. C. and Johnston, A. W. *Preliminary report on the geology of East Central Minnesota including the Cuyuna iron-ore district.* (Minneapolis: Univ. Minnesota. 1918. Pp. vi, 178.)

Harris, F. S. *The sugar-beet in America.* (New York: Macmillan. 1919. Pp. 342. $2.25.)

Professor Harris, director and agronomist of the Utah Agricultural Experiment Station, has written this book primarily for farmers who are raising beets, for agriculturalists of sugar companies, and for use as a text in agricultural colleges. After a very brief historical introduction, most of the text is devoted to sugar-beet culture. In the closing part of the volume is a brief chapter on each of the following subjects: Beet raising and community welfare; Sugar-making; Sugar-cane; World's use and supply of sugar. The appendix contains a good bibliography and statistics of beet-sugar companies and factories in the United States as well as statistics of sugar production throughout the world. The work is profusely illustrated and contains many excellent diagrams, charts, and maps. It is written in simple non-technical language and seems well adapted to present the fundamentals of beet culture to those for whom it is intended. Roy G. Blakey.

Houston, D. F. *Today and tomorrow in American agriculture. Remarks of the Secretary of Agriculture before the Association of American Agricultural Colleges and Experiment Stations, at Baltimore, Md., January 8, 1919.* (Washington: Supt. Docs. 1919. Pp. 11.)

Moorehouse, L. A. and others. *Farm practice in growing sugar beets in three districts in Colorado, 1914-15.* Department bull. 726. (Washington: Dept. Agriculture. 1919. 10c.)

Porter, J. *The farm and the nation.* (High Town, Hereford, Eng.: Jakeman & Carver. 1918. Pp. 32.)

Prescott, S. C. *Relation of dehydration to agriculture. Address before the National Association of Commissioners of Agriculture at Baltimore, January 7, 1919.* (Washington: Dept. Agriculture. 1919. Pp. 10.)

Roush, G. A., editor. *The mineral industry; its statistics, technology, and trade during 1917.* Vol. 26, supplementing vols. 1-25. (New York: McGraw-Hill. 1918. Pp. xviii, 928.)

Townsend, C. O. *The beet sugar industry in the United States.* Department bull. 721. (Washington: Dept. Agriculture. 1918. Pp. 56.)

Wright, C. A. *Mining and milling of lead and zinc ores in the Missouri-Kansas-Oklahoma zinc district.* Bureau of Mines bull. 154. (Washington: Supt. Docs. 1918. Pp. viii, 134. 30c.)

Zapoleon, L. B. *Geographical phases of farm prices: corn.* U.S. Dept. of Agriculture bull. (Washington: Supt. Docs. 1918. Pp. 53.)

Zujovic, J. M. *Le sol et la situation agraire dans les pays serbo-croates et slovènes.* (Paris: Bibliothèque de la Yougo-Slavie, 118 rue d'Assas. 1918. Pp. 80.)

Coal Conservation Committee final report. Ministry of Reconstruction. (London: Wyman. 1919. Pp. 89. 1s.)

Cotton facts. Edition of 1918. (New York: Shepperson Pub. Co. 1918. $1.)

The farmers' elevator movement in Ohio. (Wooster: Ohio Agricultural Experiment Station. 1918. Pp. 25.)

The farm market. (Philadelphia: Curtis Pub. Co. 1918. Pp. 68.)

Summarizes information obtained by the Curtis Publishing Company as a result of a survey of the farming industry. Many striking diagrams, showing value of farm property, farm output, value of crop, size of farms, farm indebtedness, etc., are included.

Report of Agricultural Commission to Europe. Observations made by American agriculturists in Great Britain, France, and Italy for the United States Department of Agriculture. (Washington: Dept. Agriculture. 1919. Pp. 89.)

Work and expenditures of the agricultural experiment stations, 1917. Part I of report on experiment stations and extension work in the United States, 1917. (Washington: Supt. Docs. 1918. Pp. 335.)

Manufacturing Industries

NEW BOOKS

Grandmougin, E. *La réorganisation de l'industrie chimique en France.* (Paris: Dunod & Pinat. 1918. Pp. xi, 277.)

Kelly, R. W. and Allen, F. J. *The shipbuilding industry.* (Boston: Houghton Mifflin. 1918. Pp. xix, 302. $3.00.)

This is a technical description of the industry, with a brief summary of the history and economics of the business. It has been written in close coöperation with those engaged in the shipbuilding industry. There are over one hundred illustrations, and appendices containing a bibliography, glossary of terms, and wage scales.

Kissell, M. L. *Yarn and cloth making. An economic study.* (New York: Macmillan. 1918. Pp. 252. $1.50.)

Le Chatelier, L. *Metallurgie d'hier et de demain.* (Paris: Letouzey. 1919.)

Armour and Company, 1919. (Chicago: Armour & Co. 1919. Pp. 28.)

Clark's directory of Southern textile mills. Does not include silk mills, woolen mills, or batting mills, except those that spin cotton.

Fourteenth edition. (Charlotte, N.C.: Clark Pub. Co. 1918. Pp. 176. $1.50.)

Power development in Alabama. Description of the system of the Alabama Power Company, including the water power development at lock twelve on the Coosa River. (Birmingham: Alabama Power Co. 1918.)

Swift and Company year book, 1919. (Chicago: Swift & Co. 1919. Pp. 58.)

Transportation and Communication

NEW BOOKS

BENEDICT, B. *Express companies in the United States.* (New York: International Socialist Society, 70 Fifth Ave. 1919. 10c.)

LEIGH, E. B. *Railway buying and industrial readjustment. An address before the National Industrial Conference Board, February 20, 1919.* (Chicago: The author, 1928 West 46th St. 1919. Pp. 11.)

MORAWETZ, V. *Solution of the railway problem. Outline of plan.* (New York: The author, 44 Wall St. 1919.)

MUNDY, F. W., compiler. *The earning power of railroads, 1918-19; mileage, capitalization, bonded indebtedness, earnings, operating expenses, cost of maintenance, fixed charges, comparative statistics, investments, dividends, guarantees, etc.* (New York: J. H. Oliphant & Co., 61 Broadway. Pp. 422. $3.)

ROBERTS, M. G. *Federal liabilities of carriers.* (Chicago: Callaghan. 1918. Pp. 3031. $15.)

WARBURG, P. M. *A suggestion of the main principles on which the solution of the railroad problem should be sought.* (New York: The author, 11 East 80th St. 1919. Pp. 36.)

Conditions for transportation progress. Report of the Railway Business Association committee on railways after the war. (New York: F. W. Noxon, Sec'y, 30 Church St. 1919. Pp. 16.)

A list of references to the more important books and articles on government control and operation of railroads. (Washington: Bureau of Railway Economics. 1919.)

Remedial railroad legislation, 1919. Preliminary edition. *Supplement.* (New York: Association of Railway Executives, 61 Broadway. 1919. Pp. 279; 98.)

The traffic field. (Chicago: LaSalle Exten. Univ. 1919. Pp. xv, 298.)

Five authors are responsible for the different parts of this volume. The industrial traffic department, by J. W. Cobey; Associated traffic management, by Brunner Robeson; Community traffic management, by L. P. Haynes; Public utility commission work, by J. H. Kane; Railway traffic management, by N. D. Chapin. The volume is of practical service for those engaged in transportation. There are many charts and diagrams.

Trade, Commerce, and Commercial Crises

NEW BOOKS

BEABLE, W. H. *Commercial Russia.* (New York: Macmillan. 1919. Pp. 278. $3.)

CLERGET, P. *La technique de l'exportation.* New edition. (Paris: Colin. 1919.)

CULBERTSON, W. S. *Commercial policy in war time and after.* (New York: Appleton. 1919. $2.)

DOUGLAS, A. W. *Merchandising.* (New York: Macmillan. 1918. Pp. 151. $1.)

Merchandising reflects the author's forty years' experience with a large hardware distributing house in the Middle West. Although the chapters upon selling are not all grouped together and although care of stock and turnover of stock precede ordering, the general arrangement of the work is not illogical. In taking up the subject of buying, Mr. Douglas, after emphasizing the purchase of goods as the basis of merchandising policy, considers the process of ordering, devoting separate chapters to regular goods, seasonable goods, and holiday goods. In the discussion of selling, Mr. Douglas merely indicates the scope of the subject, reserving fuller treatment to another work. Advertising and distribution come in each for a chapter; likewise, credit and collections. The book closes with a brief discussion of the human equation.

The merit of the work, brief as it is, lies in the attention given to matters which are important for the practical operation of merchandising, but which are often neglected in more theoretical or more general discussions of the subject. Many of the illustrations given indicate the character of the business in which the author was engaded. As a whole, the work is an addition to our present merchandising literature. However, we should appreciate very much a work the size of which did not so restrict Mr. Douglas to general statements—statements which we feel are true but which we should like to have illustrated from his fund of valuable experience.

H. R. TOSDAL.

HERUBEL, M. *L'exportation des vins.* (Paris: L'Association Nationale d'Expansion Economique. 1918.)

RAWLLEY, R. C. *The silk industry and trade.* (London: King. 1919. 10s. 6d.)

VEDDER, G. C. *American methods in foreign trade. A guide to export selling policy.* (New York: McGraw-Hill. 1919. Pp. xii, 204. $2.)

American Methods in Foreign Trade with a subtitle "A Guide to Export Selling Policy" is rather a comprehensive title for a very slender piece of work. The chapter headings cover a very wide range of topics under the general title, not only discussing the foreign trade methods and policies of individual exporters but dealing

as well with such subjects as Fundamental Weaknesses of German Trade Policy, The Webb-Pomerene Act, International Crooks, Reciprocity Treaties and Preferential Tariffs.

The material is presented in good fashion and is, on the whole, interesting. To those who are approaching the subject for the first time it will probably be stimulating and possibly helpful. A large portion of the text, however, is argumentative, and the author is quite evidently writing pet hobbies to the exclusion of some of the facts and many possible points of view. His treatment of the subject-matter is, therefore, in many cases biased and one-sided and, on the whole, does not usually rise above newspaper copy.

The inadequacy of the author's treatment of certain subjects is illustrated in his chapter on the Webb-Pomerene Law and Combinations in Foreign Trade. The entire discussion covers four pages, or a little over 1200 words. Restricted as this is for the discussion of a legal measure that was agitated throughout the entire country for two years and recommended by the President of the United States, the discussion is practically a denunciation, largely unsupported by argument. The author's conclusion is that "The Webb-Pomerene Act was, at the worst estimate, a deliberate departure from principle with ulterior motives" (p. 19). There is no statement as to what the law actually is, or how it is proposed to work; there is no discussion of the possible forms of organization under it nor any account of what has been done so far.

Again, the author treats the subject of Reciprocity Treaties and Preferential Tariffs, in less than four pages. The definitions are very inaccurate and only a part of the subject indicated is really considered. Portions of the subject, as, for example, the purpose of a bargaining tariff, the most favored national arrangement, a maximum and minimum tariff, are entirely omitted. The author quite loses sight of the problem of international commercial policy and concludes that "A fair field and no favor is all that American goods ask or need in world trade."

There is much that is suggestive in the chapters on Exclusive Agents, Export Prices, Circularizing, Export Publications, Coöperating with Agents; but even here the treatment is too cursory, and too large a portion of the text consists of platitudes to be worthy of a serious work.

E. E. Pratt.

After-war trade plans of five nations. Great Britain, France, Italy, Japan, Germany. A series of five articles setting forth the preparations which these countries are making to expand their foreign trade when the world conflict ends. (New York: N. Y. Evening Post. 1918. Pp. 22. 25c.)

Annual report of the chief of the Bureau of Foreign and Domestic Commerce to the Secretary of Commerce for the fiscal year ended June 30, 1918. (Washington: Supt. Docs. 1918. Pp. 93.)

Boston Chamber of Commerce annual report, 1917-1918, containing

directors' reports, committees, by-laws, list of members, trade rules and trade statistics, etc. (Boston: Chamber of Commerce. 1918. Pp. 291.)

Essentials in exporting. (New York: Austin Baldwin & Co. 1918. Pp. 24.)

Export trade combinations under the Webb law, approved April 10, 1918. (New York: Guaranty Trust Co. 1918. Pp. 46.)

International trade in concentrated cattle foods. (Rome: Intern. Inst. Agriculture. 1918. Pp. 73. 1.50 fr.)

Official report of the fifth national foreign trade convention. (New York: Nat. Foreign Trade Convention, Hanover Sq. 1918. Pp. 581. $2.)

The world's trade in hides, skins and leather. (Washington: Tanners' Council of the U. S. A. 1919. Pp. 62.)

Accounting, Business Methods, Investments, and the Exchanges

Principles of Business. By CHARLES W. GERSTENBERG. (New York: Prentice-Hall. 1918. Pp. xiv, 821. $3.00.)

While the appearance of this work is not a new departure in business books, it approaches one because of the author's more than usual success in compressing into a single volume material that has usually defied presentation even in several volumes. It gives in brief yet surprisingly comprehensive form a statement of the best business practice, with the reasons therefor, in business organization, finance, management, purchasing, advertising, selling, and accounting. "This book I have written," says the author in his preface, "for the experienced business man and for the young man just stepping out into business life"; for the former because "he needs to have his vision broadened . . . and to be shown the business machine as a whole"; for the latter because, first, he needs to be shown before entering into business all the elements of business brought together into a whole in which the functioning of each element may be seen as a part of the whole, and because, second, "the young student should have his new studies connected with his studies in the sciences and arts that have been pursued in the preparatory school or in the university college of pure arts and sciences."

Considering business as an art in which successful practice must be based upon rules of technique, the "principles of business," the author proceeds to set down these rules and explain their significance. As here set forth they run nearly the whole gamut of busi-

ness activity from the more general questions involved in such matters as the form of organization and the method of financing a business unit down to such details as the use of the appeal to curiosity as a factor in advertising.

The author has accomplished his purpose so far as older business men are concerned with a considerable degree of success. The book will give the business man in any one of the major functional branches of business an insight into the significance of other branches and their relation to his own activities. For the young man about to enter into the beginner's narrow niche in the business world it may well perform a similar service.

The author is not so successful in relating either the study or the practice of business to "studies in the sciences and arts that have been pursued in the preparatory school or in the university college of pure arts and sciences." The connection between these studies he attempts to establish by means of five introductory chapters on The Science of Business, The Environment of Business, The Social Sciences (two chapters), and The Scientific Method.

The reviewer is uncertain just what the business man or the business student will get from these chapters. He is sure that the economist will be disappointed in them. The failure of the business world as a whole to link up business principles and business practice with sound social science, particularly sound economics, has been a source of uneasiness to economists for a long time. If the art of business is built upon the science of economics, or at any rate upon principles which are economic, as some of us have been telling our university classes for years, it ought to be easy to show how the "principles of business" are related to the principles of value and distribution which constitute so large a part of the economist's stock in trade. But the author has not done this. His account of the social sciences consists largely of a series of long and undigested quotations; one from Hobson on the service of science to the industrial arts and the limitations of economics in this connection, one from Giddings (inserted as a long footnote) on Spencer's sociological system, two expressing the views of Giddings and Hobson respectively on the possibility of useful statistical formulation in dealing with social problems, and a quotation from J. F. Johnson on business ethics. In addition to the quotations, economics receives about six pages, mainly devoted to the historical development of the science. Political science and law

receive seven pages between them, history comes in for about three pages, and sociology teaches in two sections (one quoted from the National Civic Federation) the scope and value of welfare work. It is, of course, not the amount of space that is significant, but the material that occupies it. This is the disappointing aspect of these chapters. The most careful study of these pages will fail to show even the most astute student of the social sciences, if he does not know already, how the "principles of business" as Gerstenberg conceives them are related in any important connection to the principles of any of the social sciences. They show only that the formulated principles of the social sciences are inexact and difficult of application in practical, everyday affairs.

More than that, the economist is bound to be disappointed in another direction. He is interested in the "social point of view," in the relation between business and the public welfare, while the business man is interested, from the nature of things, mainly in private profits, and has to give his attention chiefly to creating or appropriating them for himself if he is to remain a business man. Because of this difference in point of view, some of us have tried in our classes in economics to inject into the embryo business men who fill the benches in our class rooms something of the social viewpoint and the notion of a service ethics in business as a matter of living together in a society. It is nothing if not discouraging therefore to find this book beginning and ending with a notion of business that is summed up by its author in his preface as "profits brought home with all the resources of the living man" (paraphrasing Henry Ward Beecher). The only clear presentation of the obligations of the business man as a servant of society is found in the quotation from J. F. Johnson referred to above.

It is perhaps unfair to criticize the author for not doing that which he did not attempt to do. He does not pretend to have written a book in economics. In fact he distinguishes sharply between economics as the "social science of business" and a science of business which is not concerned with social questions, which, he says, is the field he cultivates in this book. If there is a place for a science of business efficiency, divorced alike from the social aspects of business, from questions of social ethics, and from adequate consideration of the dominance of the rights of the public to "interfere" for its own protection and to demand a business spirit more nearly that of the professions, then this book should fill admirably the need for a presentation of the principles of

such a science. The hard-pressed teacher in our growing university schools of commerce and finance may well find use for this book if he is willing to give up the effort to inflict the social point of view upon budding business men, is ready to cease the attempt to relate the study of business to the social science of economics, and is prepared to settle down to the teaching of business as a mere matter of profit making, with the public's part set forth merely as that of one "minority stockholder" in business (to use Gerstenberg's figure as given on pages 242-243), in which the capitalist is the majority stockholder and labor is on a par with the public as the other of two minority interests.

The book is not wholly devoid of effort to present the question of service as a dominating element in business. The trouble is that the occasional preachments on this subject appear as excrescences upon a work whose underlying assumption is that the modern, up-to-date business man always serves society because he makes more profits that way—the greater the service the bigger the profit. It is at any rate quite probable that the business man or student reader will leave the perusal of this book congratulating himself that he lives in an age when "in the long run the business man who makes his business conform to current social ideas on what is good and what is bad for society will make the most profits" (p. 11) without troubling himself to question the source of these ideas or worrying over the truth of the author's further assumption that "whatever injures society injures him" (the business man)—so long as the injury brings him a profit!

Harvey A. Wooster.

University of Missouri.

NEW BOOKS

Alcorn, E. G. *The Alcorn system of modern bank bookkeeping and accounting.* (Columbus, O.: American Text Book Co. 1919. $3.)

Cody, S. *Commercial tests and how to use them.* (Yonkers, N. Y.: World Book Co. 1919. Pp. 216.)

The author of this volume is secretary and managing director of the National Associated Schools of Scientific Business. He describes the tests that are applied to high school graduates who are employed in the United States employment service in New York City. Particular employments concerned are office boys, general clerks and sales people, stenographers, and bookkeepers. Nineteen tests are presented.

Coss, J. J. and Outhwaite, L. *Personnel management. Topical outline and bibliography.* (Washington: Classification Division, Adjutant General's Office. Jan., 1919. Pp. 58.)

Topics are grouped under: general list of reference works; periodical and serial publications carrying items of interest to personnel managers; industrial background of today; the personnel manager; labor turnover; labor supply; trade, technical and business schools; women in industry; immigration; the analysis of the worker; job analysis; industrial training and education; following up employees after assignment; promotion and transfer; wages; conditions of labor; accidents and their prevention; fatigue and production; hours; recreation; unemployment; industrial relations; protection of labor.

EATON, W. D., editor. *Library of law, banking and business.* (Chicago: John A. H. Hertel Co. 1919. Vols. 1-6.)

EGGLESTON, D. C. *Problems in cost accounting.* (New York: Appleton. 1918. Pp. xiv, 349. $2.50.)

This volume is one of a series of texts in commerce and related subjects under the editorship of the director of the Division of Vocational Subjects and Civic Administration in the College of the City of New York. It was developed, the author states, from a course of lectures at the College of the City of New York, and is intended to illustrate the typical problems of cost accounting by examples based on the author's experience in teaching and practicing cost accounting. After the principles are explained, with these examples, problems similar in general character are set for the reader or student to work out. The examples and problems published are a selection from those used in the class-room, arranged under fifteen general heads, six dealing with material, two with labor, two with overhead, and the remainder with a variety of general matters, including some applications of the principles of cost accounting in various industries.

This book is the first of its kind to be offered to the general public, similar compilations heretofore having been available for class-room use only. And probably the present work is of greatest value in the hands of an experienced instructor. It is doubtful, in fact, whether the book is likely to appeal to readers outside the class-room, although an earnest student of cost accounting will get some real help from a study of the examples and problems. An objection, which it would be extremely difficult to overcome in a work of this kind, is that the problems are individual and detached, without any such setting as they would have in actual practice. In this way and some others the book has the air of the class-room rather than the shop or factory, although the material could never have been produced except by reference to practical experience of the author. Taken individually the problems are generally sound and helpful. In many of the illustrative forms the ruling is far too heavy and the type too large for forms of the given size and shape.

It is a serious criticism of the author's command of accounting theory that he mentions interest on a mortgage debt as part of the cost of production (p. 248). There has been, unfortunately, prolonged debate regarding interest on investment as a manufacturing cost (the reviewer's opinion being unqualifiedly in favor of its in-

clusion) but the best known exponents of the theory that interest on investment is *not* a charge to cost of manufacture agree with the reviewer that interest on borrowed money in any form has nothing to do with the matter, and is uniformly to be excluded.

All told, *Problems in Cost Accounting* is a praiseworthy effort on a new and important kind of accounting literature, but likely to be superseded in time by books which more completely reflect actual factory conditions. C. H. Scovell.

Galloway, L. *Office management: its principles and practice.* (New York: Ronald. 1918. Pp. 701. $6.)

Lewis, E. St. E. *Getting the most out of business; observation of the application of the scientific method to business practice.* Sixth edition. (New York: Ronald. 1919. Pp. 515. $2.50.)

Manchez, G. *La Bourse de Paris après la guerre.* (Paris: Delagrave. 1919.)

Meron, F. *Manufacturer's instructor and adviser.* (New York: T. Audel & Co. 1918. Vols. 1-3.)

Nicholson, J. L. and Rohrbach, J. F. D. *Cost accounting.* (New York: Ronald. 1919. Pp. xxi, 576. $6.)

Racine, S. F. *Syllabus of bookkeeping.* (Seattle: Western Institution of Accountancy, Commerce, and Finance. 1918.)

Shelp, B. B. *Office methods. A practical bibliography.* (New York: Wilson. 1919. Pp. 27. 35c.)

Simmons, W. D. *The importance of the cash discount in the American credit system. An address before the convention of the New York Wholesale Grocers' Association, January 15, 1919.* (Philadelphia: G. H. Paine. Pp. 14.)

Stiles, C. R. and Powell, E. T. *The alphabet of investment.* (London: Financial Review of Reviews. 1918. Pp. viii, 54. 3s.)

Tinkham, J. R. *Advertising is non-essential—tax it!* (Upper Montclair, N. J.: The author. 1918. Pp. 61.)

Tobin, J. J. and others. *Highway cost keeping.* U.S. Department of Agriculture bulletin. (Washington: Supt. Docs. 1918. Pp. 52.)

White, J. S. *Central station heating. Its economic features with reference to community service.* Technical paper 171. (Washington: Bureau of Mines. 1918. Pp. 23.)

Bank and public holidays throughout the world. (New York: Guaranty Trust Co. 1919. Pp. 176.)

Course in modern production methods. (New York: Business Training Corporation. 1918-1919. Vols. 1-6.)

Maximum prices on iron and steel products. (New York: American Iron and Steel Institute, 61 Broadway. 1918. Pp. 176. 50c.)

A report on the profitable management of a retail lumber business. (New York: A. W. Shaw Co. 1918. Vols. 1-5. $12.40.)

Thirteenth annual convention of the National Association of Comptrollers and Accounting Officers, June, 1918. (Detroit, Mich.: J. W. Eisman, City Hall. 1918.)

Capital and Capitalistic Organization

NEW BOOKS

HAUSER, H. *La syndicalisation obligatoire en Allemagne.* (Paris: Tenin. 1919. 3.50 fr.)

JUNG, A. *Die staatliche Elektrizitäts-Grossversorgung Deutschlands.* (Jena: The author. 1918. Pp. vi, 121.)

TWYEFFORT, F. H. *Business corporations in New York.* (Rochester, N. Y.: Lawyers' Coöperative Pub. Co. 1918. Pp. cxliv, 1521. $10.)

A proposed solution of the gas problem. (Kansas City: Chamber of Commerce. 1918. Pp. 31.)

Report of special committee on government ownership and operation of public utilities. (New York: Merchants' Association of New York. Jan., 1919. Pp. 86.)

In this report the Merchants' Association "reaffirms its resolutions of November, 1916, opposing government ownership and operation of public utilities," on the ground that "governmental methods in the conduct of business affairs are inherently defective by reason of the fundamental restrictions imposed by our form of government, and that such methods are often inefficient and wasteful and therefore unsuited to the conduct of business undertakings."

No attempt is made to prove the case against public ownership by means of an array of statistics; on the contrary, questions of quality of service and of administration are stressed. Throughout, it is premised that "the fields of politics and economics are dissimilar and separate." Political rather than economic considerations largely determine the methods of conducting public business, and the results are found to be unsatisfactory for the following among other reasons:

1. "Political selection produces a personnel poorly qualified for economic service."
2. Executive officials under public control are hampered by rigid legal restrictions.
3. "The financial needs of a public business undertaking are usually not promptly or sufficiently met."
4. There is frequently "wasteful distribution of capital outlays."

After commenting briefly upon some examples of unsuccessful government ownership, the committee concludes that the changed conditions resulting from the war do not alter the basic argument that "political control, operating through political methods, is destructive of economic efficiency, and therefore such control should not be applied to undertakings of an essentially business nature."

It would be difficult to find a better summing up of the arguments

against public ownership as a general proposition. Those who disagree with the conclusions reached will probably be disposed to take a different point of view as to what undertakings are of an "essentially business nature." EDMOND E. LINCOLN.

Harvard University.

Labor and Labor Organizations

History of Labor in the United States. By JOHN R. COMMONS, DAVID J. SAPOSS, HELEN L. SUMNER, E. B. MITTELMAN, H. E. HOAGLAND, JOHN B. ANDREWS, and SELIG PERLMAN, with an introductory note by HENRY W. FARNAM. (New York: Macmillan Company. 1918. Pp. xxv, 823; xx, 620. $6.50.)

The publication of these two volumes brings to fruition researches upon which Professor Commons and the members of his seminar at the University of Wisconsin have been engaged for the past twelve years. In 1909-1911, Professor Commons with the coöperation of a number of other scholars published the *Documentary History of American Industrial Society* in eleven volumes, a collection of the more important documents relating to the history of American labor, with accompanying explanatory introductions. The present work traverses much the same ground with the exception that the subjects of slavery and serfdom, to which the first two volumes of the *Documentary History* were largely devoted, are not covered in the *History of Labor*. Frequent references to the *Documentary History* connect the two publications in such a way as to make a single work, the earlier publication serving as a form of documentary appendix.

The treatment adopted is chronological or rather periodic. Each of the six parts thus deals with a single period and each is written by a member of Professor Commons' seminar. Part I, Colonial and Federal Beginnings (to 1827), is by David F. Saposs; part II, Citizenship (1827-1833), by Helen L. Sumner; part III, Trade Unionism (1833-1839), by Edward B. Mittelman; part IV, Humanitarianism (1840-1860), by Henry E. Hoagland; part V, Nationalisation (1860-1877), by John B. Andrews; part VI, Upheaval and Reorganization (since 1876), by Selig Perlman.

It may be said conservatively that each part presents the most complete and authoritative narrative account available of the period with which it deals. There is hardly an important episode in the history of the labor movement which is not set in a new light. Thus, Mr. Saposs' chapters on the events from colonial times to 1827 are distinguished by an illuminating account of the

Cordwainers' conspiracy cases. Miss Sumner's history of the period from 1827 to 1837 contains a definitive study of the rise and development of workingmen's parties in New York—a chapter in the history of American labor hitherto only half written. Mr. Mittelman has given us an apparently final account of the development of the City Trades Union in the period from 1833 to 1837. Mr. Hoagland's history of the period from 1840 to 1860 is valuable because of the new light thrown on the early coöperative movement and on the "industrial congresses" of 1845 to 1856. The National Labor Union of 1866-1872 has nowhere else been so capably described as by Mr. Andrews in the section devoted to the period from 1860 to 1877. Finally, Mr. Perlman has included in his history of events since 1876 an account of the Knights of Labor which is not merely the best, but may fairly be said to be the only good account of that highly interesting organization.

The work is more, however, than merely the best available account of the events in the history of the labor movement. Careful attention has been paid throughout to the general economic background and to the labor philosophy of each period. The reader will find admirable summaries of the doctrines of such indigenous labor philosophers as Skidmore and Evans. The sheer joy of discovery has probably led to the magnification of some of these hitherto almost unknown priests of the movement. Ira Steward, for example, bulks somewhat more largely in the *History* than he does in actual influence. Also the relations between the American labor movement and European labor philosophies are carefully worked out. The chapter on Revolutionary Beginnings, for instance, is a contribution not only to the history of American labor but also to the world history of socialism.

It will, perhaps, seem ungrateful when so much has been done to ask more. Professor Commons has a clear right to an honorable discharge from the task at which he has labored so long and so well, but full benefit will not accrue from his work until one more step has been taken. In a brief preface to the first volume, he has outlined what may be styled "the theory of the development of the American labor movement." Undoubtedly the authors of the separate parts have built upon that foundation. Mr. Saposs, for instance, has included in his history of the period to 1827, a detailed statement of Professor Commons' very interesting theory of the development of bargaining classes, copiously fortified by historical material. But in the work as a whole the amount of de-

tail is so great that the theory is not closely knit with the facts. On the other hand, the preface is too compact for the reader to grasp fully the relations of theory and event. A final single volume which would combine the developmental theory with enough of the concrete history to give actuality would fittingly crown the largest and most capably executed piece of investigation in economic history which has been undertaken in our generation.

George E. Barnett.

The Johns Hopkins University.

Hours of Work as Related to Output and Health of Workers. Wool Manufacturing. Research Report Number 12. (Boston: National Industrial Conference Board. December, 1918. Pp. 78. $1.00.)

"The purpose of the investigation is to establish the facts of this controversial subject and to present such conclusions as are clearly warranted by a scientific analysis of these established facts . . . to assemble the available results of actual experience . . . to determine the effect of reductions in work-hours on output and on health of workers" (p. vii and p. 1).

In the light of their own statement of purpose the authors should be judged. The order of treatment is as follows: (1) The statistical basis of the report; (2) the description of the general features of wool manufacturing, the chief processes and the hours of work; (3) a discussion of the hours and output of different groups of mills, according to hours worked and amount of reduction in hours, the largest group being the 54-hour group, in which there were 68 establishments, of which 55 reported a decreased output under the reduced schedule of working hours; (4) factors bearing on efficiency, such as size of mill, proportion of male workers, character of product, amount of reduction in hours, piece-work and day-work efficiency, speed of machinery, and attitude of workers; (5) actual statistical data as to output, and the difficulty of securing comparable data; (6) conclusions as to output; (7) the factors which affect the health of wool mill workers and conclusions as to the effect of the reduction of hours.

The data upon which the report is based were gathered by schedules of inquiry sent to the members of the National Association of Wool Manufacturers and other manufacturers, and by field investigation. Employers and workers were consulted and working conditions were observed. The ***statistical basis*** [italics

are mine] of the conclusions, the report informs us, consisted of replies to the schedule of inquiry from 111 establishments, employing 71,595 workers, supplemented by reports of field agents "who visited many mills." Here it should be stated that some detailed report of what the visitors actually did in their field investigation and how much time was devoted to an individual mill is needed. Any superficial observation of complex conditions is inadequate. Altogether the report covers 126 establishments in 13 states, almost one half of all the wool mill workers in the United States. Hours had been reduced in 85 establishments, with over 65,000 workers, in recent years and upon the reported results from these mills the conclusions rest.

Nowhere in the report do we find the exact form of the schedule sent to these mills—the specific questions the management of the mill was expected to answer, which is a grave defect in a scientific report; but the reader is told on page 3 that "*the information was in the form of statements reflecting the judgment of the respective manufacturers as based upon experience, and was in substantial accord with the results indicated by analysis of statistical comparisons of output* which were supplied by 13 of these establishments"[1] [italics my own]. The fact then seems to be that in only 13 out of 85 establishments, about 15 per cent of the total, are the conclusions based on actual statistical evidence and in these cases the data were furnished by the management of the mill. The authors of this report are hardly justified in speaking of the judgments of the other 85 per cent of the mills as statistical evidence at all for purposes of conclusions—"clearly warranted by a scientific analysis of the established facts" (their own statement of purpose).

The report frankly states the great difficulties in the way of securing comparable statistical data on output. There is manufactured a variety of products in a single mill. The weave and weight of the same product vary. Cotton warp is not comparable with woolen warp and the finish and weight may not run uniform over any considerable period. The speed of the loom is a variable factor and the yarn differs in size and material, all of which affects output when measured in pounds of yarn or yards of cloth. Moreover, the reduction of hours in over half the mills was made several years ago, and conditions have changed in the meantime.

[1] This last statement is to be questioned in view of the facts presented later in this review.

Besides, some mills now keep careful output records but did not do so before hours were reduced. A superintendent describes the factors that influence output directly or indirectly as "almost infinite." The president of one mill declares that "at least 90 per cent of the difference between the output of two weavers is due to the individuals themselves." The difference between high and low individual efficiency was reported as much as 30 per cent in some cases. As a result, the piece-workers more often than time-workers maintained output under a reduced schedule of hours of work. War conditions affected seriously the labor situation in the mills and thus influenced output.

Yet, notwithstanding the above and other difficulties and the fact that only 15 per cent of the mills actually submitted statistical data in support of their statements, the report declares that the conclusion is valid that "the 54-hour week has unquestionably placed a burden on the industry from a production standpoint." Furthermore, "the problem is by its very nature distinct from a problem in the so-called exact sciences." But statistics is an exact science which deals with numerical statements. Such statements were submitted from 13 mills and the results do not appear to be consistent with those obtained from the mere statements by the management, as shown in the table below. The authors admit the value of control experiments in the factory but fear that the worker may influence the result by conscious effort and they believe that "such experiments can be considered only as supplemental to experience as recorded under conditions as they actually occur in the factory." But the report itself has described these actual conditions so varied in the mill that it would seem a hazardous scientific procedure to depend upon "statements reflecting the judgment of the respective manufacturers as based upon experience" in so large a proportion of the total establishments reporting. In fact some experimental control of variable factors would seem the only way really to understand "conditions as they actually occur in the factory." Is it not the purpose of research in business to find ways of making business facts more exact and has not increasing precision attended these efforts in many fields? These precise measurements have actually been made in the very field covered by this report. A monograph, entitled *Use of Factory Statistics for the Investigation of Industrial Fatigue: A Manual for Field Research*, by P. S. Florence (Columbia University, New York, 1918), discusses in detail the difficulties and the practical procedure.

Furthermore, the Ministry of Munitions in England and the Sub-Committee on Fatigue under the Advisory Commission of the Council of National Defense for the United States have made such investigations, and have published or are about to publish valuable results. Other studies of this character are outlined in the text and excellent bibliography of a recent book by Frederic S. Lee, *The Human Machine and Industrial Efficiency*, (Longmans, Green & Co., 1918). The reviewer offers in evidence these studies in order to show that the matter under discussion is capable of exact measurement and analysis. The report says that "precise data, however, are not necessary" (p. 45). Perhaps not, to indicate some change in output, but that is not an explanation of why this change took place.

In the 54-hour group of mills 11 of the 68 mills furnished statistical comparisons of output compiled from book records while the remainder of the mills merely sent statements. The following table compiled from the facts stated on page 44 will summarize the situation:

NUMBER OF MILLS REPORTING SITUATION AS TO OUTPUT UNDER MODERN SCHEDULE OF HOURS REDUCED TO 54 PER WEEK.[1]

Output increased, maintained, or decreased in varying degrees	Total establishments under 54-hr. schedule	Eleven mills which submitted statistics from book records	Fifty-seven mills reporting by mere statement of the management
I Output increased	6	5	1
II Output maintained	7	–	7
III Output decreased but not proportional to time reduction	17	3	14
IV Output decreased in proportion to time reduction	26	2	24
V Output decreased more than proportional to time reduction	5	1	4
VI Not reporting amount of decrease	7	–	7
Total	68	11	57

[1] A total of 68 establishments, 11 of which submitted statistics from book records.

The reviewer recalls the statement (page 3 of the report) previously quoted, that "the information was in the form of statements reflecting the judgment of the respective manufacturers as based upon experience, and was in substantial accord with the re-

sults indicated by analysis of statistical comparisons of output which were supplied by 13 of these establishments." Eleven of these 13 are tabulated above and a glance will show that they contradict the statements from the other 57 who answered, not by statistics, but by statement. Only 8 of the latter, out of the 57, reported increased or maintained output, whereas 5 out of 11 offered statistical evidence of increased output. But if the 11 submitting the statistical evidence are representative, then a like proportion of increased or maintained outputs might be expected to appear among the statements of the other 57. Instead of the ratio of 5 to 11, the facts show 8 out of 57. Likewise, whereas 24 out of 57, reporting by statement, showed a decrease of output in proportion to decreased hours, only 2 out of 11 showed this situation where the actual book records were submitted. Seven out of 68 were positive in statement as to decreased output but did not attempt to state the amount. Further, on the same page, it is asserted that the mills where output was increased or maintained were chiefly the older and smaller mills. [Note that these were the mills furnishing the statistical evidence from their books.] And elsewhere the report accounts for this fact by the opinion that the larger and more modern mills, supplying the bulk of the trade, were already better organized before the reduction of hours and therefore after the reduction in working time could not maintain output by improvement in organization. Does it seem reasonable that, if these older and smaller mills were really less well organized, they could furnish statistical comparisons of output records from their books before and after the reduction of hours more easily than the better organized? Is it not likely that the larger and more modern mills, which reported in the main by statements of the managements instead of actual statistical facts from the records, were affected by a greater variety of variable factors described in this report, and, therefore, did not attempt to furnish statistical records to show comparative actual conditions of output. Then, is not the evidence for decreased output, for the most part, *ex parte* statements of a non-statistical character? General judgments and opinion evidence are of less value the more complex the variable factors involved. A single research authority must be the judge of the value of the evidence and not many individual mill executives.

On the matter of wage adjustments to compensate reduced working time and the effect upon output, the report, in Appendix A,

gives the answers received from the individual establishments. There is a very uniform report of "proportional increase" in wages, whatever this very vague statement may mean. Over what time did this "proportional increase" take place? Was it made to compensate for reduced hours as a stimulus to production or was it in response to the higher cost of living from 1912 to 1917? The report records the conclusion that "no clear relationship between changes in wages and changes in output, when hours of work were reduced, was indicated."

Now as to the second purpose of the report, to record the effect of the reduction of hours on the health of the worker, the evidence "suggests on the whole only unimportant changes—improvement in only a small number of cases." These conclusions are again based on *ex parte* opinion evidence and not on statistical evidence, as shown in Appendix A. There are no adequate records of sickness and reasons for absence from work. The following samples of reports on health changes are cited as given in Appendix A: "no difference," "good effect," "about the same, possibly a trifle better," "very little sickness," "health is good as it has always been," "health just as good with longer hours as with shorter." This evidence obviously has no scientific value.

The report gives the reader many interesting facts about woolen manufacture and the variety of factors affecting output and health, but its conclusions are based upon statements of opinion which, in the reviewer's opinion, are not adequately supported by statistical data of an unquestionably representative character. (Statistical data from some half dozen mills are published in some detail in the report.) The purpose stated in the beginning by the authors has not been attained. "The facts of this controversial subject" have not been established. The subject is left no less controversial. It follows that complete "scientific analysis" is impossible without the facts. Records of experience have been assembled to a very limited extent and nothing positive has been established as to health.

The writer wishes to see research of this character perfected and useful but he doubts the value of the *questionnaire* method in securing the evidence. It does not inspire confidence in the accuracy of the results and the method is entirely inadequate to cope with a complex factory organization with a great number of varying factors entering into any given result. Besides, the employer and his agents are interested parties and on this account

the records and results must be guarded from possible bias. This cannot be done in complex factory statistics by means of the *questionnaire* method of inquiry, but it can be done and is being done by the much more difficult and more scientific procedure of analysis of factory records, which are either available now or could be made available for industrial experimentation.

Robert E. Chaddock.

Columbia University.

The Human Machine and Industrial Efficiency. By Frederic S. Lee. (New York: Longmans, Green and Company. 1918. Pp. 119. $1.10.)

The trade-union slogan of a fair day's pay for a fair day's work has always been difficult to apply both as to time and as to wages. The result has been guessing at half and multiplying by two. Often the waste of human material in putting a man at the wrong job has been great. Professor Lee in this volume proposes a science of industrial physiology based upon the facts of present-day industry. The experience of Great Britain in the war munitions factories has been largely drawn upon. The activity of the human body, which plays so large a part in industry, must be organized on a physiological basis before the highest degree of efficiency can be secured. In other words, a science of the human machine must be developed in industrial establishments through observation and experiment.

Most of the substance of the book was given in two lectures at the Harvard Medical School and is now presented in seventeen short chapters on what may be called the use of human machinery without which mechanical machinery is of little value. Certain fundamental conditions of coördination between the worker and his work must be observed. These include the following:

1. Workers should be qualified for the work that they are to do.
2. Workers should produce a daily output in accordance with their individual capacities for work.
3. Workers should maintain their working power from day to day and from week to week.
4. Workers, once they have proved competent, should be retained.

Most of these points are merely axiomatic; the difficulty has been to translate them into actual practice. Professor Lee brings out clearly the various tests for vocational fitness, although, as he says, these methods are not very exact as yet. Fatigue is per-

haps the greatest enemy to high production and therefore much attention must be given to this subject in any study of industrial efficiency. The length of the working day is thus important and the best number of hours in various industries should be determined by scientific investigation. The practice of what is called in this country "soldiering" and in Great Britain "ca'canny," or self-limitation of output, is condemned as one of the most potent and most universal foes to efficiency. The causes are various, but the cutting of piece rates is said to be the principal one. The keeping of a fair rate between the employer and employee should be observed.

The study is of considerable scientific merit and one of its most valuable features is its numerous suggestions for further study. A rather complete bibliography shows what has already been done in the field.

GEORGE M. JANES.

University of North Dakota.

NEW BOOKS

ANGELL, N. *The British revolution and the American democracy; an interpretation of British labor programmes.* (New York: Huebsch. 1919. Pp. 319. $1.50.)

BENN, E. F. P. *The trade of to-morrow.* (New York: Dutton. 1918. Pp. 232.)

In *The Trade of Tomorrow* the author brings together a number of his scattered ideas regarding solutions of present-day problems of labor and capital. In the introduction he gives us a criticism which is not ill-founded from a scientific point of view when he writes: "This book is not a treatise on economics. The only argument in it is an argument for the admission of industry to a place in the Constitution and its organization upon a representative basis. It comes into the class of propagandist literature and expresses somewhat incoherent views of that peculiar creature, commonly known as the business man." Although Mr. Benn urges the formation of a Ministry of Commerce and Industry for the purpose of encouraging and facilitating British trade, much more emphasis is laid upon the creation of a Trade Council in connection with each industry, to which questions might be referred. Two-thirds of the members of such councils would be drawn from trade associations and trade unions; the remaining third would consist of government officials and scientific experts. Considerable attention is given to trade organizations, including export associations. In dealing with foreign organizations, such as German cartels and American trusts, the author gives some evidence of proceeding upon an insufficient basis of fact. Nevertheless, some of the suggestions developed in

the work are stimulating and indicate a more than usually active imagination. HARRY R. TOSDAL.

CARLTON, F. T. *Organized labor in American history.* (New York: Appleton. $1.75.)

COGHLAN, T. A. *Labor and industry in Australia; from the first settlement in 1788 to the establishment of the commonwealth in 1901.* Four volumes. (New York: Oxford Univ. Press. 1918. Pp. 2450. $33.)

COMMONS, J. R. *Industrial goodwill.* (New York: McGraw-Hill. 1919.)

CONNOLLY, J. *Labor in Irish history.* American edition. (New York: Donnelly Press, 164 E. 37th St. 1919. Pp. 144. $1.)

DEELEY, W. J. *Labour difficulties and suggested solutions. A manual.* (Manchester, Eng.: Sherratt. 1918. Pp. 175.)

KATAYAMA, S. *The labor movement in Japan.* (Chicago: Kerr. 1918. Pp. 147. $1.)

LEVERHULME, LORD. *The six hour day.* (New York: Holt. 1918. $3.25.)

ODENGRANTZ, L. C. *Italian women in industry. A study of conditions in New York City.* (New York: Russell Sage Foundation. 1919. Pp. 345. $1.50.)

PERKINS, H. F. *The manufacturer's wage problem.* (Chicago: Union League Club. 1919. 5c.)

PHELPS, E. M., editor. *University debaters' annual, 1917-1918.* (New York: H. W. Wilson Co. 1918. Pp. 274. $1.80.)

Contains constructive and rebuttal speeches delivered in debates of American universities and colleges during the year 1917-1918. Chapters 1 and 4 deal with compulsory arbitration of industrial disputes; chapter 2, government price control; chapter 5, federal regulation of industry; and chapter 6, minimum wage.

RECKITT, M. B. and BECHHOFER, C. E. *The meaning of national guilds.* (New York: Macmillan. 1918. Pp. xvi, 452. $2.50.)

ROCKEFELLER, J. D., JR. *Representation in industry. Address before the war emergency and reconstruction conference of the Chamber of Commerce of the United States.* (New York: The author, 26 Broadway. 1919. Pp. 31.)

ROWNTREE, B. S. *The human needs of labour.* (London: Nelson. 1918. Pp. 166.)

SMELSER, D. P. *Unemployment and American trade unions.* (Baltimore: Johns Hopkins Press. 1919. Pp. vii, 154.)

STENDER, A. *Hotel employees and labor unions.* (New York: International Geneva Association, 143 W. 44th St. 1918. Pp. 7. 20c.)

WOEHLKE, W. V. *Union labor in peace and war.* (San Francisco: Sunset Pub. House. 1918. Pp. 141.)

This small paper-bound pamphlet contains the greater part of the data published previously in the *Sunset Magazine* under the title of "Bolshevism of the West." It is a vigorous condemnation of organized labor in California during the past decade, written in a most prejudiced vein and flippant style. The stories concerning the abuses of the trade unions are for the most part founded on fact, but only one side of the story is ever presented. It is regrettable that every reader cannot know the actual situation and all the facts surrounding it, how the articles upon which the pamphlet is based came to be written, who inspired and paid for them, etc. If every reader knew these things, the attitude of the writer and the contents of the pamphlet would be more satisfactorily evaluated. I. B. C.

Decisions of courts affecting labor: 1917. Bull. 246. (Washington: Bureau of U. S. Labor Statistics. 1918. 25c.)

Covers decisions affecting employers and employees, wages, Sunday labor, factory regulations, railroads, workmen's compensation, etc.

Handbook and report of the National Council and Union of Women Workers of Great Britain and Ireland. (London: Parliament Mansions, Victoria St. 1917-1918. Pp. 151. 1s.)

In re mediation proceedings between Division 268 of the Amalgamated Association of Street and Electric Railway Employes of America and the Cleveland Railway Company, before the National War Labor Board. Statement of the Cleveland Railway Company. (Cleveland: Squire, Sanders & Dempsey. 1918. Pp. 105.)

Juvenile employment during the war and after. (London: Ministry of Reconstruction. 1919. 6d.)

Living wage (adult males), 1918. Bulletin of the New South Wales Board of Trade. (Sydney: Gov. Printer. 1918. Pp. 121.)

The manufacture of army shirts under the home work system. Women in war industries series, no. 1. (Washington: Council of National Defense, Advisory Commission. 1918. Pp. 24.)

Proceedings of the twenty-first annual convention of the Texas State Federation of Labour, held at San Antonio, Texas, March, 1918; including the constitution and laws. (Austin: The Federation. 1918. Pp. 118.)

Report of the proceedings at the fiftieth annual trades union congress at Derby. (London: Trade Union Congress. 1918. 2s.)

Rest periods for industrial workers. Research report no. 13. (Boston: National Industrial Conference Board. 1919. Pp. iv, 55. $1.)

The study of accidents for the year 1917. Portland Cement Association, bureau of accident prevention and insurance. (Chicago: Portland Cement Assoc. 1918. Pp. 28.)

Sixty-seventh annual report of the Amalgamated Society of Engineers, 1917. (London: 110 Peckham Road. 1918. Pp. 510.)

Weekly earnings of women in five industries (paper boxes, shirts and collars, confectionery, cigars and tobacco, and mercantile establishments. (Albany: N. Y. Dept Labor. 1919. Pp. 21.)

Money, Prices, Credit, and Banking

NEW BOOKS

ANDERSON, B. M., JR. *Price readjustment.* (New York: Nat. City Bank. 1918. Pp. 10.)

BENSON, R. *State credit and banking during the war and after.* (London: Macmillan. 1918. 5s.)

BOYD. *Early currency and banking in North Carolina.* Papers of the Trinity College Historical Society, series X. (Durham, N. C.: Trinity College. 1919.)

DE CASTRO, P. P. *Sistema positivo centrico del credito agricola.* (Madrid: Edicion de la Revista de Educacion Familiar. 1918.)

GIRAUD, S. *Le role de la banque de France pendant la guerre.* (Montpellier: Impr. de l'Ecole Professionale de Typographie. 1918.)

HARRISON, M. W. *Bank law and taxation digest.* (New York: Bankers Pub. Co. 1918. Pp. 108. $2.50.)

LEVY, E. *Exchange tables; for converting dollars into francs and francs into dollars; at all rates from 5.00 to 5.79; thus covering both war and normal requirements.* (New York: Dutton. 1919. $2.)

MARTIN, G. *Les problèmes du crédit en France.* (Paris: Payot. 1919. 4.50 fr.)

MILLIÈS-LACROIX. *Renouvellement du privilège de la Banque de France. Rapport 355.* (Paris: Comm. Finan. du Senat. 1918. Pp. 192.)

ROBERTS, G. E. *A creditor country. An address before the Investment Bankers Association of America at Atlantic City, December, 1918.* (New York: Nat. City Bank. Pp. 18.)

DE TOCA, S. *La organizacion bancaria del credito industrial.* (Madrid: Impr. de Jaime Ratés. 1918.)

Acceptance primer. (New York: Foreign Trade Banking Corporation. 1918. Pp. 22.)

Annual report of the Director of the Mint for the fiscal year ended June 30, 1918, including report of the production of precious metals during the calendar year 1917. (Washington: Supt. Docs. 1918. Pp. 259.)

Credits and collections. Shaw banking series. (Chicago: A. W. Shaw Co. 1918. Pp. xviii, 267.)

Like its four predecessors in this series, *Credits and Collections* presents "tested plans, methods, organization and the like," gathered from the practice of a large number of American banks. Many of

the devices described for the efficient handling of the work of the credit and collection departments have considerable merit, and the average banker will therefore find the book worth while. The portion of the work which deals with the credit granting process, moreover, is in refreshing contrast with the almost unbroken recital of experiences which characterizes the other volumes of the series. Here considerable attention is given to broad underlying principles of credit granting. The part of the book dealing with collections is largely a succession of descriptions of approved devices for handling the various collection operations. G. W. DOWRIE.

Eighth annual report on wholesale prices, Canada, 1917. (Ottawa: Dept. of Labour. 1919. Pp. viii, 156.)

First interim report of committee on currency and foreign exchanges after the war. (London: Wyman. 1918. 2d.)

Gold production of the British Empire. Report of the committee appointed by the Treasury. (London: Wyman. 1919. 2d.)

Loans and discounts. Shaw banking series. (Chicago: A. W. Shaw Co. 1918. Pp. 264.)

The first part of the book is devoted to suggestions looking toward the improvement of the work of the loan department, special emphasis being laid upon the efficient keeping of records, the active functioning of the discount committee and the proper handling of the routine of discounting. Part two deals with the technique of the various kinds of loans with the exception of agricultural and real estate loans. The former are dignified by treatment in a separate part which covers almost half of the book. In part four, under the caption Three Important Problems, chapters on real estate loans, home builders' loans, and the relation of the savings account to the loan department are treated, the connection of the last-named topic with the other two not being apparent.

The book is frankly a description of the "how" to the exclusion of the discussion of the "why." Undoubtedly practical bankers will find in this symposium of experiences many helpful suggestions, but the reader who has only an academic interest in banking is likely to be bored by the endless amount of detail. G. W. D.

Proceedings of conference of business men and bankers, January, 1919. (New York: Merchants' Assoc. of N. Y. 1919. Pp. 30.)

Contains addresses by W. P. G. Harding and Paul M. Warburg on acceptances.

Proceedings of the thirty-ninth annual meeting of the Building Association League of Illinois, October, 1918. (Chicago: Am. Bldg. Assoc. News Co. 1918. Pp. 176.)

Report of Committee on Financial Facilities, on financial needs of trade and industry after the war, the credit system before the war and now, new issues, and state aid. (London: Wyman. 1919. 2d.)

Text book for speakers on thrift stamps and war-savings stamps. (Washington. Supt. Docs. Pp. 56.)

Trade acceptances. (Philadelphia: Mascot Pub. Co. 1918. Pp. 24.)

Wartime changes in the cost of living, July, 1914-November, 1918. Research report no. 14. (Boston: Nat. Indus. Conference Board. 1919. Pp. 33. $1.)

Working classes cost of living committee, 1918, report. Cd. 8980. (London: Wyman. 1918. Pp. 28.)

Public Finance, Taxation, and Tariff

Income Tax Procedure, 1919. By Robert H. Montgomery. (New York: The Ronald Press Company. 1919. Pp. xxviii, 979. $6.00.)

The writers of textbooks on the income tax have had an exceedingly hard row to hoe this year. To sell their books rapidly they had to get them on the market before March 15 when the individual returns were due. But the new law was not signed by the President until the end of February, and the report of the conference committees did not go before the House and the Senate until February 8 and 10 respectively, so that the time was exceedingly short. Although the Internal Revenue officers proceeded with phenomenal expedition and published a preliminary edition of the regulations under the new law almost simultaneously with the enactment of the law itself, yet these regulations had not been fully distributed before the first "returns" were due and delinquent. In face of all these difficulties Mr. Montgomery sent his book to press under date of February 25, 1919. He promises, in a supplement "which will be forthcoming during March," but which has not been received in time for this review, to add a study of the new regulations.

The American Economic Review said of the 1918 edition of this book (see vol. VIII, no. 2, p. 380) that it was "among the best of the handbooks" on the income tax. The 1919 edition is better than that of 1918. The improvements are well worth noting in detail.

Radical changes from the former editions are found in the arrangement of this edition. One of them is the segregation, under the caption "former procedure," of decisions and rulings under the 1913, 1916, and 1917 laws, which are important because still in force as to incomes attributable to those years, but which do not apply generally to income of 1918. The introductory chapter on the history and origin of the income tax has been rewritten for this edition by Professor Robert Murray Haig. A very useful section dealing with the administration of the tax law has

been added to the introduction. There is a marked improvement throughout the book in the general arrangement and presentation, which now show the hand of a skilled editor. It is particularly helpful to have the book logically divided into: part I, Application and Administration, which covers exemptions, returns, rates and computations, protests, appeals, refunds, information and stoppage at source; part II, Income; part III, Deductions; part IV, Special Classes of Taxpayers; part V, Excess and War Profits Taxes; and part VI, Miscellaneous, including, however, only the capital stock tax and the munitions manufacturers' tax.

An examination of the book shows that no pains has been spared to include all the new rulings since the last edition down to February 25, 1919, and all the new points of the "revenue law of 1918" so far as they could be drawn from the text itself.

The clarification of the distinction between capital and income which came with the rulings under the 1917 law and which has been embodied in the new law is well brought forth in the new edition (see p. 27, chs. XI and XXVI on depletion, and elsewhere). It is not surprising that the author failed to catch on his "cursory examination" of Regulations 45 (which he could not have had in hand more than a few hours) the remarkable concession contained in Article 47, that where compensation for a loss of property, as by fire, exceeds the value of the property lost "the transaction is not regarded as completed at this stage, however, if the taxpayer proceeds immediately in good faith to replace the property." One might be excused for not believing his eyes the first time he read that concession which has the most far-reaching consequences. Yet the concession is the logical sequence of those provisions of the new law, notably the one relating to losses by decline of inventory values, which recognize that, owing to the fluctuations in the value of money, "net railroad *money* income" is not always what it seems.

In the historical survey there is a lack of clearness as to the rates of the Civil War income tax (p. 16). One is left to infer from the language used that the rates under the law of 1862 and those under the law of 1864 were changed only as to their size. As a matter of fact the form of progression was fundamentally changed as well. Under the law of 1862 the rate changed abruptly at $10,000 from 3 per cent in the excess over $600 to 5 per cent on the excess over $600. That is, an income of $9,999 paid a tax of $281.97 and an income of $10,001 paid a tax of $470.05.

In 1864 the present system of applying an increased rate only to the excess over the maximum subject to the preceding rate was introduced. So that the rate was not 10 per cent on the aggregate of an income above $10,000, as implied in the book, but 10 per cent on the excess over $10,000. That is, the tax under the 1864 rates is only 10 cents more for $10,001 than for $10,000. Since this is a feature which differentiates the American from any other important income tax it is worth while to note when it was invented. This lack of clearness, which arose apparently from failure to consult the original statutes, is not new; it is to be found also in most of the older textbooks and histories.

Last year the book was criticised for its hostile attitude toward the farmers. This year, perhaps because there is a special schedule for farmers' income, the book contains a separate chapter on farmers. But that chapter contains little more than copies of the regulations. The alleged advantage to the farmer arising from not including crops consumed as food in the taxable income, is again allowed to obscure the fact that making each year stand on its own bottom creates far greater inequalities against the farmer. It seems rather far fetched to reproach the farmer for buying "automobiles and farm equipment" from "taxable income rather than from borrowed money"; and the apparent assumption that "farm equipment," by which is probably meant plows and tractors, is a capital investment and not a current expense is very weak accounting logic.

Last year comment was made on the "impatient expression of criticism, both of the law and of the administration." This year some of those expressions are graciously and condescendingly modified. "The 1918 revenue bill is almost a good one" (p. iii). Still, Congress has not "kept faith with the taxpayers" (p. iii). The apology to the Bureau of Internal Revenue is in substance: You're not quite such a fool as I said you were since you have taken a "more reasonable attitude" (p. 5).

While the author claims that "no suggestions for evading the tax" will be found in the book, it is still true as was said last year, that there are many arguments which a lawyer would be glad to incorporate into his brief in some case involving tax dodging. Notable in this connection is the broad hint on page 499 that a man may sell, say, Liberty Bonds, in December, take the loss as on a "closed transaction," then buy them back in January. This is all right, we are told, if it is not a "wash sale." It may be

legal but it is "rough stuff" (p. iv) just the same. The same line of criticism is applicable to the discussion (p. 407) of the "cost of professional books." In last year's addition there was an outright error on this point when it was said that such purchases were "allowable deductions." This year the statement is wholly revised, but a new and equally erroneous argument is set up in order to arrive at the same conclusion, namely, that since "depreciation may be claimed in respect thereof—the entire cost of professional or business books is deductible." If professional men handle their books so roughly as this implies why not have them printed as are babies' picture-books on stout linen cloth and varnished over. Nor does obsolesence apply. Even Colonel Montgomery's 1918 edition is not 100 per cent obsolete because of the publication of his 1919 edition.

Lest anyone should be misled by the above criticisms, which, after all, are on relatively small points, into thinking that it is not worth while to purchase the 1919 volume because he has the 1918 edition, we shall close this review by a specific reference to the chapter on Depreciation. This chapter has been entirely rewritten, and that not merely to embody the new provisions of the law and the new regulations, but in a way to present the interesting principles of accounting involved. Possibly depreciation is the most troublesome entry the taxpayer has to make. It is certain that it will be difficult to find anywhere any clearer, more practically useful and easily applicable instructions than have been written by Colonel Montgomery in this admirable chapter.

Carl C. Plehn.

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NEW BOOKS

Adams, R. C. *Taxation in Nevada; a history.* (Reno: Nevada Hist. Soc. 1918. Pp. 195. $1.50.)

Black, H. C. *Income and other federal taxes 1919.* Fourth edition revised. (Rochester, N. Y.: Lawyers' Coop. Pub. Co. 1918. $6.)

Blondel, G. *Pour une paix durable.* (Paris: Bossard. 1919. 4.50 fr.)

Fitzpatrick, F. A. *Budget making in a democracy. A new view of the budget.* (New York: Macmillan. 1918. Pp. 317. $1.50.)

Discussion of budgetary practice in the United States has centered, during the past decade, on the problem of devising a means of escape from the planless, extravagant appropriations that accompany the fiscal legislation of the national and many of the state

governments. Both in Congress and in the state legislatures coördination of appropriations is defective and expenditures are authorized in many cases without sufficient inquiry to determine their desirability. It is a common opinion that departmental estimates would be better coördinated and that many unwise expenditures would be eliminated if the chief executives—the president and the governors—were given greater responsibility in budget making.

The author takes issue with those who propose an enhancement of executive authority at the expense of a corresponding decrease of legislative control. He points out that to a considerable degree power finally to determine appropriations involves power to control the structure and politics of the government. A president or governor whose budget estimates might not be increased, except by a vote of two thirds of the legislature, could in many instances as effectively destroy a department or prevent the enforcement of a law as though he were the sole source of legislative authority. Such an arrangement would be intolerable in any government pretending to democracy. Only if the executive is directly responsible to the legislature may he be entrusted with so much power.

Budget making is essentially a legislative function and the part of the executive is purely preparatory. The chief executive should make the budget report to the legislature and he should as a matter of practice hold himself responsible for the amounts recommended for the support of the various departments, except in the case of the courts, the legislature and the independent administrative commissions. Beyond this he should not go, except in the exercise of the veto power. Moreover, the device of continuing appropriations should be used to minimize log-rolling in the legislature and to prevent the governor and the minority of either branch of the legislature from crippling established departments by defeating appropriations for their support.

For the reform of legislative procedure the author makes the usual recommendations. Appropriation committees should be as few as possible; the various appropriations should be correlated according to governmental functions; committees should make their hearings and proceedings public; and final consideration of the budget should be in committee of the whole. Disagreements between the two houses might be minimized by the creation of joint committees on finance.

The book is apparently intended for readers who have neither the time nor the inclination to study more elaborate treatises on the subject. It presents in a clear, interesting way the case for the legislative as opposed to the executive budget. Bibliography and index are lacking and references to standard treatises are few. On the other hand, recent discussions of budget reform in Congress, in state legislatures, and in constitutional conventions are considered under appropriate topics. F. B. Garver.

Fitzpatrick, E. A. *Experts in city government.* (New York: Appleton. 1919. Pp. v, 363. $2.25.)

Contains a score of brief stimulating essays by different authors dealing with problems of city making and more particularly the aid which expert service and specialized training can render.

Gide, C. *Des projets d'entente financière après la guerre.* (Paris: Tenin. 1919. 3 fr.)

Glasson, W. H. *Federal military pensions in the United States.* Edited by D. Kinley. (New York: Oxford Univ. Press. 1918. Pp. xii, 305. $2.50.)

Haristoy, J. *L'indemnité de guerre et la conscription des richesses de L'Allemagne.* (Paris: Alcan. 1919.)

Hollander, J. H. *War borrowing. A study of treasury certificates of indebtedness of the United States.* (New York: Macmillan. 1919. Pp. 215. $1.50.)

To be reviewed.

Holmes. *Federal income and profit taxes.* Second edition. (Chicago: Callaghan. 1919. $6.)

Huang, H. L. *The land tax in China.* Columbia University studies in political science, vol. LXXX, no. 3. (New York: Longmans. 1918. Pp. 180. $1.50.)

Mr. Huang's monograph on the land tax owes much of its very considerable interest to the fact that nearly half of its pages are given up to a summary sketch of the history of landed property in China. That fundamental portion of the economic life of the Chinese people exhibits, in comparison with European history, certain material similarities in systems of ownership, but also a wide dissimilarity, which by a fair surmise may seem to have had a determining influence in making the national life of China unlike that of occidental countries.

In no other large country has the tendency toward an oppressive concentration of land ownership met with a resistance so vigorous, and on the whole, ultimately triumphant. It appears that there have been several periods of concentrated ownership, several attempts with varying success, by imperial legislation, at a division of the great estates. Finally, the earlier Manchurian rulers contributed mightily to the dispersion of landed wealth, by an extensive distribution of land among the landless. One immediate cause of this wide distribution of ownership has been, apparently, the despotic character of rulership in China. There have been no "peers of the King": the rulers have been able to conserve the vigor of the masses by securing their hold on the soil. In several instances the frightful slaughter of foreign invasion or civil war has contributed to the same result, in rendering extensive areas available for colonization. Thus, apparently, by despotism and massacre China has been preserved from the ruin of *latifundia*. The fertility of the soil has been preserved through the centuries by the labors of an industrious yeomanry. A wide dissemination of ownership has maintained a

spirit of democracy which renders less difficult the establishment of a republic.

Mr. Huang has given an exceptionally clear and useful account of the confusion in the land tax and of the measures suitable for giving it definiteness and order. His conclusion is unassailable that this and other sources of revenue in China may readily be increased to a great extent by a rational systematization. In at least one argument there appears a tendency to exaggerate this possibility. The salt revenue is said to have been increased fourfold by the reform between 1913 and 1916, the figures being borrowed from a foreign periodical in Shanghai. The reference to 1913, as though it were a normal year, is a rather surprising error, since in that year the whole financial system had almost broken down. The increase under the reformed system has doubtless been considerable but much less than the claims of the foreigner and the modesty of some Chinese (including Dr. Huang) would indicate.

A. P. Winston.

McVey, F. L. *The financial history of Great Britain, 1914-1918.* Preliminary economic studies of the war, no. 7. Carnegie Endowment for International Peace, Division of Economics and History. (New York: Oxford Univ. Press. 1918. Pp. iv, 101.)

The purpose of this study is to give a condensed account of the methods by which the British government has attempted to solve the financial problems thrust upon it by the great war. The period studied extends from August, 1914, to the end of March, 1918. The topics considered by the author fall into three groups: (1) emergency measures for the reëstablishment of financial and commercial relation disrupted by the declarations of war; (2) public finance problems; and (3) some financial effects of the war. In the first part are described without comment the moratorium, the Courts Emergency act, the use of legal tender currency notes, and the events necessitating the closing of the stock exchange.

The second part deals in some detail with the successive war budgets, the votes of credit and the cost of the war, the war loans, foreign exchange and dollar securities, and taxation. Of the four war budgets reviewed, that presented by Mr. McKenna for the year ending March 31, 1916, was probably the best from the viewpoint of good fiscal practice. It was the only one to exceed in its provisions the actual expenditures and it provided for more nearly adequate taxation than any preceding. The attitude of Bonar Law, who succeeded McKenna, was less favorable to taxation and until the presentation of the budget for 1918-19 the tendency was to leave taxes as they were and to rely upon borrowing to meet the growing expense of military operations. About one fourth of the total cost of the war to April, 1918, exclusive of loans to the allies and the dominions, was raised by taxation. This the author is inclined to regard as a creditable showing in spite of the severe criticism of the London *Economist* and of other financial authorities. On the whole the British have distributed the burden of taxation in an equitable man-

ner: the rich are hit by the excess profits and the super-taxes, while those of moderate means are required to contribute by lowering the exemption of the income tax and by duties on commodities, chiefly beer and tea.

On the question whether the short-term government notes and the legal tender currency notes have been chiefly to blame for the rise in prices the author supports the conclusion that the increase has been due primarily to scarcity of commodities and of labor and to the unusual demands of the war. On the other hand, the extensive employment of short-term notes necessitated constant resort to bank credit and thus contributed to currency inflation. Moreover, the short-time obligations falling due at brief intervals embarrassed the larger loan operations.

One of the most striking effects of the war upon the fiscal arrangements of the British government has been the decrease of power of the House of Commons. The exigencies of war finance seemed at the outset to demand greater liberty of the executive. Hence the House ceased to prescribe in detail the purposes for which the public funds might be expended. This plan has not been without its disadvantages and at the close of the period covered by this study an insistent demand for a partial reëstablishment of parliamentary control had made its appearance.

In a brief account of complex and technical matters, such as this study, excellence depends largely on the skill of the writer in selecting the most significant facts and in weaving them together into a related whole. The first requirement has been admirably met, but either because of lack of space or the desire to avoid technicalities, the second has been only partially fulfiled. Extensive verification by the reviewer has revealed only a small number of unimportant instances of inaccuracy among the many tables, statements, and quotations which have been brought together from official documents and other sources. F. B. Garver.

Pierson, A. N. *Analysis of the laws affecting municipal and county finances and taxation.* (Trenton: New Jersey Commission for the Survey of Municipal Financing. 1918. Pp. 124.)

Seligman, E. R. A. *Our fiscal difficulties and the way out.* (Albany: N. Y. State Tax Commission. 1919. Pp. 16.)

Willoughby, W. F. *The movement for budgetary reform in the states.* (New York: Appleton. 1918. Pp. xi, 254. $2.75.)

Annual report of the comptroller, state of New York. (Albany: Comptroller's Office. 1919. Pp. xxvii, 427, 95.)

Digest of decisions of the United States courts, Board of General Appraisers and the Treasury Department under the customs revenue laws, together with the tariff acts from 1883 to 1913 and certain other customs revenue statutes. (Washington, Supt. Docs. 1918.)

Eleventh annual report on the statistics of municipal finances for city and town fiscal years ending between November 30, 1916, and March

31, 1917. (Boston: Mass. Bureau of Statistics. 1918. Pp. xxix, 305.)

Les finances de guerre de la France. La politique financière du gouvernement pendant les années 1915 et 1916. (Paris: Brière. 1919.)

Present sources of internal revenue and rates of taxation under existing law. (Washington: U. S. Office of Internal Revenue. 1918. Pp. 12.)

Renseignements statistiques relatifs aux contributions directes et aux taxes assimilées. (Paris: Ministère des Finances. 1918. Pp. 232.)

Statistique générale de la France. Statistique annuelle du mouvement de la population de la France d'après les registres de l'état civil au cours des années 1915, 1916, 1917, dans 77 departements. (Paris: Ministère du Travail et de la Prévoyance Sociale. 1919. Pp. 20.)

Suggestions of state comptroller Eugene M. Travis in relation to taxation. (Albany: Joint Committee of the Senate and Assembly on Taxation. 1919. Pp. 21.)

War profits and excess profits tax regulations under the Revenue act of 1918. (New York: Guaranty Trust Co. 1919. Pp. 27.)

The world's war debt. (New York: Mechanics & Metals Nat. Bank. 1919. Pp. 58.)

Population and Migration

NEW BOOKS

Briand, C. *Le dépeuplement de la France, son état actuel, ses remèdes.* (Paris: Bossard. 1919. Pp. 93. 2.40 fr.)

Hunter, E. B. *Infant mortality. Results of a field study in Waterbury, Conn.* Infant mortality series, no. 7. (Washington: Children's Bureau. 1918. Pp. 157.)

This is the fourth study of infant mortality in American cities made by the Children's Bureau, studies having been made also in Johnstown, Pa., Montclair, N. J., and Manchester, N. H. Investigations in other cities, including Saganaw, Mich., New Bedford and Brockton, Mass., and Baltimore, Md., are in progress and will be published later.

The report considers practically the same factors of infant mortality dealt with in the other studies—the age of the mother at the birth of the child, the order of birth and the length of the interval between births, ignorance of the mother of child care, the nursing care received by the mother during confinement, the method of feeding, the employment of the mother during pregnancy, the father's earning and the income of the family, nationality, housing, and the work of the civic and health agencies.

The results of this investigation, like all the others which the Children's Bureau has made, show "the repeated coincidence of the marked and generally regular decline in the infant mortality rate

with the increase of the father's earning. . . . The infant mortality rate for Waterbury for babies whose fathers earned less than $450 during the year following the birth of the baby was 153; the rate very gradually decreased in the next two income groups, but it did not fall below 100 until the group $850 to $1,049 was reached." It was 117.9 for the $850 to $1,049 group, 85.8 for the $1,050 to $1,249 group, and 89.6 for the $1,250 and over group.

The infant mortality rate was considerably higher for children of foreign born mothers (134.8) than those whose mothers were native born (97.7). Of the three chief classes of foreign born mothers represented, the rate among the children of the Lithuanian mothers was highest (207.7), the Irish next (184.6) and the Italians next (109.9). The rate was also lower for the children of foreign born mothers able to speak English than for those unable to speak the language. The study concludes that "Waterbury's infant mortality rate of 122.7 is largely the result of deaths from preventable causes" and recommends "an immediate campaign to reduce the rate to a minimum."

It will be desirable if, after completion, all the studies of the investigation can be summarized in a single report.

H. H. Hibbs, Jr.

Machat, J. *La dépopulation de la France. Les faits. Leurs conséquences matérielles. Le grand devoir.* (Paris: Ligue pour la Vie. 1918. .60 fr.)

Maroi, S. *I fattori demografici del conflito Européo.* (Rome: Athenaeum. 1918.)

Mitchell, G. W. *The question before Congress, a consideration of the debates and final action by Congress upon various phases of the race question in the United States.* (Philadelphia: A. M. E. Book Concern. 1918. Pp. 247.)

Rageot, G. *La natalité, ses lois économiques et psychologiques.* (Paris: Flammarion. 1919. 4.75 fr.)

Fertility of marriage. England and Wales. Census, 1911, vol. XIII, pt. I. (London: Registrar-General. 1918.)

Population and its distribution, compiled from the United States Bureau of Census figures. (New York: J. W. Thompson Co. 1918. Pp. 218. $2.50.)

Seventy-fifth annual report on births, marriages and deaths for the year 1916. (Boston: Secretary of the Commonwealth of Massachusetts. 1918. Pp. 273.)

Social Problems and Reforms

NEW BOOKS

Allen, C. R. *The instructor, the man, and the job. A handbook for instructors of industrial and vocational subjects.* (Philadelphia: Lippincott. 1919. Pp. vii, 373.)

Contains chapters on training in the plant, analysis and classifica-

tion of trade knowledge, trade instruction and its methods. The author has been superintendent of instructor training in the United States Emergency Fleet Corporation.

Bailey, W. B. *Children before the courts in Connecticut.* Dependent, defective, and delinquent classes series no. 6. (Washington: Children's Bureau. 1918. Pp. 98.)

Beatty, A. J. *Corporation schools.* (Bloomington, Ill.: Public School Pub. Co. 1918. Pp. 152. $1.25.)

Bogardus, E. S. *A guide for writing social science "papers."* (Los Angeles: Univ. of Southern California. 1918. Pp. 20. 25c.)

Bradley, F. S., and Williamson, M. A. *Rural children in selected counties of North Carolina.* (Washington: Children's Bureau. 1918. Pp. 118.)

Elliott, A. W. *The cause of the social evil.* Third edition, revised. (Macon, Ga.: The author. 1919. Pp. 122. $1.50.)

Findlay, J. J. *Young wage-earner and the problem of his education.* (London: Sidgwick. 1918. Pp. 211.)

Gordon, E. B. *The Maine law.* Studies and documents of the anti-alcohol movement, 3. (New York: Revell. 1919. Pp. 124. 75c.)

Leake, A. H. *Vocational education of girls and women.* (New York: Macmillan. 1918. Pp. 430.)

Moulton, H. G. *Public works or public charity? How to meet the labor crisis arising from the demobilization of troops and war workers.* (Chicago: Union League Club. 1919. Pp. 19. 5c.)

Roan, W. C. *Vocational guidance and the public schools.* (Washington: U. S. Bureau of Education. 1919. Pp. 151.)

Sawistowsky, R. E. *City planning for Davenport, 1918.* (Davenport, Iowa: Board of Public Works. 1919. Pp. 81.)

Slingerland, W. H. *Child welfare work in Oregon. A study of public and private agencies and institutions for the care of dependent, delinquent and defective children.* (Eugene: Univ. of Oregon Extension Division. 1918. Pp. vii, 131.)

Smith, E. J. *Housing: the present opportunity.* (London: King. 1918. Pp. 98. 1s.)

Scroggs, J. W. *Social problems.* (Norman: Univ. Oklahoma. 1919. Pp. 156.)

Swift, W. H., director. *Child welfare in North Carolina. An inquiry by the National Child Labor Committee for the North Carolina Conference for Social Service.* (New York: National Child Labor Committee. 1918. Pp. 314. $1.)

This report deals in a direct and emphatic way with the conditions existing in a state which has an almost overwhelming program to carry out. The survey is presented under the following subjects:

Dependency and Delinquency, Child Caring Institutions, Agriculture, Rural School Attendance, Child Labor, and Law and Administration.

The juvenile offender is still handled according to antiquated ways, nor is there adequate public provision for the dependent or feeble-minded child. There are, however, a considerable number of child-caring institutions, some of which are doing excellent work. All orphanages must be licensed by the state, but child placing is poorly organized and is hardly practiced at all by the institutions. The adverse agricultural situation also operates rather harshly against the children of the state, especially as it reflects itself in child labor, illiteracy, and bad housing conditions. In the rural districts the school attendance is poor and the school terms are short. The children of the land owners lose less time than the children of tenant farmers. Child labor takes many forms. The report mentions work in the cotton mills but gives practically no description of its character.

The laws relating to child welfare are analyzed and their administration is discussed. Many recommendations are made, but they are so scattered through the report that the casual reader will find it difficult to obtain a picture of the needs of the state. Although presenting much unfavorable information the report is not critical in tone; it represents an honest effort to arrive at the facts and to use them for instructive purposes. George B. Mangold.

Tead, O. *The people's part in peace.* (New York: Holt. 1918. Pp. 156. $1.10.)

Written during the final phase of the world war this essay reflects the vision of so many idealists that in the peace settlement which was manifestly soon to come, the causes of war would be forever removed and the world left free from the incubus of militarism to develop its life in peace and prosperity. Its purpose was "to suggest how the people may play a real part in the rearing of a just, democratic and stable peace." This peace must include a true League of Nations democratically constituted, together with international agreements for the solution of the basic economic problems, which as long as they remain unsolved will constantly menace the peace of the world. These problems are grouped under six heads: (1) the purchase of raw materials; (2) the sale of goods into foreign markets; (3) the sale of credit in foreign lands; (4) the export of capital for developments in foreign lands; (5) access to adequate shipping facilities; (6) movements of population between countries caused by varying living and working conditions. These topics are all discussed from a temperate and scholarly viewpoint, and show the futility of any political settlement which leaves these economic questions untouched. G. L. Arner.

Veblen, T. *The higher learning in America. A memorandum on the conduct of universities by business men.* (New York: Huebsch. 1918. Pp. viii.)

Advising children in their choice of occupation and supervising the working child. (Washington: U. S. Dept. Labor. 1919. Pp. 14.)

Annual report of the Jewish Agricultural and Industrial Aid Society for the year 1918. (New York: 174 Second Ave. 1918. Pp. 49.)

A case of federal propaganda in our public schools. (Boston: Nat. Indus. Conference Board. 1919. Pp. 13.)

The Catholic Social Guild and its work. Yearbook for 1919. (London: The Guild. 1919. 1s. 2d.)

Child welfare in Alabama. An inquiry by the National Child Labor Committee under the auspices and with the coöperation of the University of Alabama. (New York: Nat. Child Labor Committee. 1918. Pp. 249.)

The church and the home-coming man. Suggestions for coöperation. (New York: Joint Commission on Social Service of the Protestant Episcopal Church. 1919. Pp. 30.)

The fifth annual report of the Homestead Commission, Commonwealth of Massachusetts. Pub. Doc. 103. (Boston: The Commission. 1919. Pp. 34.)

Housing after the war. Reports of the Housing of the Working Classes Committee, being extracts from the minutes of proceedings of the council, July 23 and October 15, 1918. (London: London County Council. 1918. Pp. 474. 1s. 2d.)

The municipal index, 1917. (New York: Municipal Journal. 1918. Pp. 118.)

Contains references to articles in more than 60 periodicals, grouped under the following titles: roads and pavements; sewerage, drainage and sanitation; water supply; street lighting and power; fire and police; street cleaning and refuse disposal; motor vehicles; traffic and transportation; city planning; government and finance; bridges; structural materials; miscellaneous. These main titles are classified under such topics as accounting, convict labor, and valuations and rates.

Occupations; short lists of books in the library. (Boston: Public Library. 1919. Pp. 14.)

Official handbook of national kitchens and restaurants. (London: Ministry of Food, 4 St. Paul's Churchyard. 1918. Pp. 64.)

Prisoners and juvenile delinquents in the United States, 1910. (Washington: Bureau of the Census. 1918. Pp. 535.)

Problems of reconstruction. A symposium. (London: Unwin. 1918. Pp. 315.)

The relation of industry to employment provision for the war blind. (Gilford, Baltimore, Md.: Red Cross Institute for the Blind. 1918.)

Report of the United States Housing Corporation. (Washington: U. S. Dept. Labor, Bureau of Industrial Housing and Transportation. 1919. Pp. 126.)

Rural children in selected countries of North Carolina. Rural child welfare series 2. (Washington: Children's Bureau. 1919. 25c.)

A rural social survey of Orange Township, Blackhawk, County, Iowa. (Ames: Agricultural Experiment Station. 1918. Pp. 450.)

Second annual report of the Federal Board for Vocational Education, 1918. (Washington: Supt. Docs. 1918. Pp. 172.)

Sixth annual report of the Chief, Children's Bureau, to the Secretary of Labor, fiscal year ended June 30, 1918. (Washington: Children's Bureau. 1918. Pp. 27.)

Social reconstruction; a general review of the problems and survey of the remedies. Reconstruction pamphlets, no. 1. (Washington: National Catholic War Council, 930 14th St. 1919. Pp. 24. $1.)

State housing manual; containing state tenement house act, state hotel and lodging house act, state dwelling house act. (Sacramento, Calif.: Housing Commission. March, 1918. Pp. 119.)

Trade foundations based on producing industries; a prevocational textbook, by prevocational and vocational directors, instructors, and tradesmen. (Indianapolis: Guy M. Jones Co., Merchants Bank Bldg. 1919. Pp. 522. $125.)

Trades and occupations; a classified list of some of the most useful books in the library. (Brooklyn, N. Y.: Public Library. 1919. Pp. 30.)

Tuberculosis findings. No. III. Framingham monograph no. 5. (Framingham, Mass.: Community Health Station. March, 1919. Pp. 35.)

Insurance and Pensions

NEW BOOKS

Barbour, R. P. *The theory and mechanics of underwriting. A lecture to insurance women.* (New York: Insurance Society of N. Y. 1919. Pp. 12.)

Dominge, C. C. and Lincoln, W. O. *Fire insurance inspection and underwriting; an encyclopedic handbook defining insurance terms and describing processes and materials used in mercantile and manufacturing establishments, and their fire hazards.* (Chicago: Spectator Co. 1918. Pp. 511. $5.)

Gephart, W. F. *Effects of the war upon insurance, with special reference to the substitution of insurance for pensions.* Preliminary economic studies of the war, no. 6. Carnegie Endowment for International Peace, Division of Economics and History. (New York: Oxford Univ. Press. 1918. Pp. 302. $1.)

Glasson, W. H. *Federal military pensions in the United States.* Carnegie Endowment for International Peace, Division of Economics and History. (New York: Oxford Univ. Press. 1918. Pp. xii, 305. $2.50.)

HOFFMAN, F. L. *Facts and fallacies of compulsory health insurance.* (Newark, N. J.: Prudential Ins. Co. 1919.)

HOFFMAN, F. L. *Failure of German compulsory health insurance. A war revelation. An address delivered at the twelfth annual meeting of the Association of Life Insurance Presidents.* (Newark, N. J.: Prudential Ins. Co. 1918. Pp. 21.)

LINDSAY, S. McC. *Insurance in war time and after.* (New York: Appleton. 1919. $2.)

PERKINS, C. R. *The agent. A lecture to insurance women.* (New York: Insurance Society of N. Y. 1918.)

The cost of compensation insurance in Virginia, describing the Virginia workmen's compensation act and discussing methods which produce compensation insurance at cost. (Boston: Liberty Mutual Ins. Co. 1918. Pp. 32.)

Fire insurance laws, taxes and fees, containing a digest of the statutory requirements in the United States and Canada relating to fire insurance companies and agents. Eighteenth annual edition, revised to September 1, 1918. (Chicago: Spectator Co. 1918. Pp. 539.)

Gain and loss exhibit for 1917. (New York: Spectator Co. 1918. Pp. 24.)

Proceedings of the special committee of Parliament (Canada) to consider and report upon the Pension Board, the pension regulations, and the sufficiency or otherwise of the relief afforded thereunder, the pension lists in force in Canada for disabled and other soldiers and the dependents of those killed while on active service, and any other matters relating thereto. (Ottawa. 1918. Pp. 349.)

Reports of fire insurance companies for year ending December 31, 1917. Thirteenth annual edition. (New York: Spectator Co. 1918. Pp. 44.)

United States Steel and Carnegie pension fund. Treasurer's and manager's eighth annual report, for year ending December 31, 1918. (Pittsburgh: U. S. Steel & Carnegie Pension Fund. 1919. Pp. 8.)

Workmen's compensation legislation of the United States and foreign countries, 1917 and 1918. Bulletin 243. (Washington: UU. S. Bureau of Labor Statistics. 1919. 40c.)

Pauperism, Charities, and Relief Measures

NEW BOOKS

ENGELMAN, M. *Four years of relief and war work by the Jews of America, 1914-1918.* (New York: Schoen Prtg. Co. 1918. Pp. 66.)

McLEAN, F. H. *Abstract of a report on the Department of Charities of the City of Rochester, N. Y.* (Rochester: Bureau of Municipal Research. 1918. Pp. 37.)

SLINGERLAND, W. H. *Child-placing in families.* (New York: Russell Sage Foundation. 1919. Pp. 261. $2.)

This is one of a series of books on special aspects of child welfare contributed by the Russell Sage Foundation. It is intended as a manual for practical workers in the field of child placing and is certain to serve a very useful purpose. The quality of child placing is so poor that a book such as this has been badly needed to develop standards and better methods. In part I the author sketches the organization of child-placing agencies and classifies children according to various social types; but the most valuable subject-matter is concentrated in part II under the title, The Technique of Child-Placing. A study is made of the problem, beginning with the reception of the child by an agency and following with the different processes of treatment and care. Emphasis is placed on the need of careful case study and of adequate record forms; plans are given for the erection of typical receiving homes for the children; the selection of family homes is considered; principles of child saving are discussed, and the need of proper supervision is earnestly demanded. However, no attempt is made to standardize this phase of the work. The author pleads for the state supervision of all child-caring agencies, whether they receive public funds or not, and clearly summarizes the advantages of such supervision.

In the discussion of systematic revision of child welfare laws, the defects and conditions revealed by the Missouri Children's Code Commission of 1916 are briefly detailed. However, adoption by deed was abolished in 1917 and a state-wide juvenile court law has been enacted. A chapter is devoted to the illegitimate child, but the subject is treated rather cautiously. Although the radical Norwegian law is denominated "sensible," in the enumeration of its principal provisions no reference is made to the important stipulation requiring joint responsibility for a child in case several men are implicated and the identity of the father cannot be definitely proven. Nor is mention made of the most radical law in the United States, that of North Dakota.

The book is enriched with a number of excellent illustrations, and also includes a short but well-selected bibliography on child welfare.

GEORGE B. MANGOLD.

WARNER, A. G. *American charities.* Third edition, revised by MARY ROBERTS COOLIDGE. (New York: Crowell. 1919. Pp. xix, 490. $2.50.)

This admirable revision of *American Charities* enables the book to continue its reputation as the classic in this field of sociological literature and its service as a textbook. With but slight variation the order of the chapters is that of the previous edition. However, several chapters dealing with the problems of poverty and of heredity have been added. The most notable contributions are the keen analysis of the present-day thought regarding charitable work and the array of new and well selected illustrative material. In ten years many changes have occurred and therefore the urgent need

of acquaintanceship with the freshly accumulated wealth of pertinent facts and figures. Chief among the subjects that are introduced or given new vitality and discussed in their relation to current thought are the eugenic program, alcoholism, commercialized vice, the Mendelian laws, the Kallikak and other degenerate families, industrial accidents, child labor, pauperism, unemployment, care of dependent children and of the feeble-minded, social insurance, federated philanthropy, state supervision of private charities, boards of social welfare and supervision and control of state charities.

There is little deviation from the point of view originally expressed by Professor Warner. As a consequence the social aspects of intemperance and of immorality are not adequately treated. Classified in this revision as personal causes of degeneration these vices are nevertheless largely a result of controllable social conditions. In a similar way the attack on poverty, although much more vigorously expressed than in previous editions, is unusually conservative and does not definitely attempt to grapple with the problem in a concrete way. Public outdoor relief, which the previous edition says should "usually be discontinued," is now tolerated and emphasis laid on the need of correcting faulty methods of administration, but the recent experiences with public subsidies to private charities indicates no reason for changing the attitude of antagonism to the policy. The chapter on The Trend of Modern Charity, is largely rewritten and emphasizes the need of preventive work. An enlarged and well selected bibliography completes the book.

G. B. M.

First annual report of the Commissioner of Charities and Corrections of Westchester County, New York. (East View, Westchester County, N. Y. 1918. Pp. 187.)

The roots of poverty. Forty-first annual report of the Charity Organization Society of Buffalo. (Buffalo: The Society, Social Service Bldg. 1918. Pp. 59.)

Thirty-ninth annual report of the State Board of Charity of Massachusetts, for the year ending November 30, 1917. (Boston. 1918. Pp. vii, 119.)

Socialism and Co-operative Enterprises

The Results of Municipal Electric Lighting in Massachusetts. By Edmond Earle Lincoln. Hart Schaffner and Marx Prize Essays in Economics. (Boston: Houghton Mifflin Company. 1918. Pp. xx, 484. $3.00.)

This book is an attempt to state impartially the facts as to eighteen public and seventeen private electric generating plants, and twenty-one public and sixteen private distributing plants, which purchase their electricity. On the basis of the facts as developed the author attempts to draw "scientific" conclusions as to

the relative merits and shortcomings of public as compared with private ownership and operation. On the whole, he has done fairly well in the collection and presentation of the detailed facts. Public records are supplemented with information secured from local and corporate records and by personal visits. The plants in Massachusetts are chosen because the records for such plants have been kept for a longer period and more accurately and completely than in other states.

The method used by the author is to compare the publicly owned or operated plants with the privately owned and operated plants on points where information of record can be secured, such as: station equipment, fuel consumption, load factor, street lighting costs, rates and service, the connected load, financial results, free service, unit costs in operating expenses, the disposal of net income, labor and wages, and the selection of employees. Certain facts are given as to the local background for each plant, and an appraisement is made as to the operating and distributing conditions surrounding each plant. This is important, as this method requires that the plants be so nearly comparable that a change in form of management from public to private or vice versa would secure the results characteristic of public or of private management, as the case may be, just because of the difference in the type of management.

As a matter of fact the two classes of plants are not exactly comparable, neither as to the charter or legal rights or powers, nor as to operating or distributing facilities and opportunities. For instance, the private companies are "centrally controlled," and this fact, according to the author, gives to the private companies some advantages over the isolated public plants, the only element of "central control" with the public plants being the supervision common to the private plants of the State Board of Gas and Electric Light Commissioners. Again, "in most cases the municipalities acquired their plants because otherwise they would have had no electrical service." A comparison between such of those private plants as are well located commercially with such of those plants as are public in order to get a service private capital would not at that time offer to give, is of little value without proper appraisal.

The author in conclusions and in appraisals leans toward the private rather than the public plant. For instance, he makes such generalizations as:

Under democratic institutions, the larger the governmental body, the less economic and more political it becomes, and the more energy is wasted in accomplishing little. To blaze the trail is the work of a select few, not of the people *en masse*. The electrical industry as *all* industries which reach their perfection will be developed by personal genius and individual effort, urged on by the desire to serve, no doubt, but more potently stimulated by the prospect of material rewards (p. 368).

This is rather a "large" conclusion for the concluding paragraph of a monograph based on the study of about six dozen electric plants in one state. The whole book bears out the inference that these sentences reflect the "point of view" from which the work was done rather than a scientific conclusion based solely on the facts developed. However, the author has done better work even as to his conclusions than most authors in this field have done, while but few equal him in the accuracy and completeness of details and of presentation.

CLYDE L. KING.

NEW BOOKS

BOUGLÉ, C. *Chez les prophètes socialistes.* (Paris: Alcan. 1919. 3.50 fr.)

DEBS, E. V. *Before the court Nearing.* (New York: People's Print. 1919. Pp. 19. 10c.)

HALSTEAD, W. R. *The tragedy of labor; a monograph in folk philosophy.* (New York: Abingdon Press. 1919. Pp. 107. 50c.)

HICKEY, M. J. *Bolshevism. Self-defined and self-convicted. A collection of official decrees.* (Washington: Nat. Assoc. Manufacturers. 1919. Pp. 28.)

LAIDLER, H. W. *Study courses in socialism.* (New York: Intercollegiate Socialist Society, 70 Fifth Ave. 1919. Pp. 32. 10c.)

LANZILLO, A. *La disfatta del socialismo: critica della guerra a del socialismo.* (Florence: La Libreria della Voce. 1918. Pp. v, 301.)

LENSCH, P. *Three years of world revolution.* (London: Constable. 1919. 5s.)

MYERS, W. S. *Socialism and American ideals.* (Princeton, N. J.: Princeton Univ. Press. 1919. Pp. 100. $1.)

RUSSELL, B. *Proposed roads to freedom; socialism, anarchism, and syndicalism.* (New York: Holt. 1919. Pp. iii, 218. $1.50.)

TEITSWORTH, G. W. *Democracy against autocracy and socialism.* (Minneapolis: Augsburg Pub. House. 1918. Pp. 122.)

TODD, A. M. *Municipal ownership, with a special survey of municipal gas plants in America and Europe.* (Chicago: Public Ownership League of America. 1918. Pp. 122.)

This is the second booklet published by the Public Ownership League of America in their efforts to carry on an organized propaganda, based on the "investigations" of "competent and reliable authorities," according to their own statement. The author, having stated in his preface that he has "for over thirty years made a special study of public utilities under both public and private ownership in our own and foreign countries," launches forth in the first chapter with the premise that "Public ownership is a natural government function and necessary to secure democracy." Three sketchy chapters follow on the development and scope of the gas industry in the United States. Other chapters deal in a most superficial fashion with the gas plants in Philadelphia (now privately owned), in Richmond and in Duluth (both municipally owned). One of the longest chapters is devoted to The Fight for Municipal Gas in Kalamazoo, which to date has been unsuccessful. In the space of 15 pages there is an attempt to prove that public ownership of gas plants in Great Britain, viewed from every angle, has been a pronounced success as compared with private industry in the same field. Marked emphasis is placed upon one or two apparently successful examples of municipal ownership, while failures are ignored and no mention is made of successful private plants.

The point of view throughout is wholly partisan, and no fundamental analyses of the questions involved are presented. Important physical features of the business, very significant in making comparisons, are utterly ignored. The author's few second-hand figures are backed up by frequent quotations from the antiquated studies of James, Bemis, and Parsons, the most recent of which is 20 years out of date, and none of which were made without personal bias. Investigations by those opposed to public ownership are ignored, and their statements are gratuitously assumed to be "misleading" or dishonest. The notion is constantly stressed that our officials and legislators are too weak and unprincipled to withstand bribery by public service corporations privately owned, but it is further inferred that if such enterprises were *entirely* in public hands the character of these same wrong doers would be so thoroughly changed as to debar political corruption!

As there is so little of scientific merit in the book, it scarcely calls for further discussion. It is unfortunate, however, that at a time when the question of public ownership is of such vital importance, those who take the trouble to write on the subject should not study their fields more carefully and give their readers something really worth while.

EDMOND E. LINCOLN.

VANDERVELDE, E. *Socialism versus the state.* (Chicago: C. H. Kerr Co. 1919. Pp. 229. $1.)

VERINDER, F. *Methods of land nationalisation: a brief, critical, examination of some proposals of the Land Nationalisation Society.* (London: League for the Taxation of Land Values. 1918. Pp. 16. 2d.)

Williams, A. R. *Russian soviets. Seventy-six questions and answers on the workingman's government of Russia.* (New York: People's Council. 1919. Pp. 29. 10s.)

Woolf, L. S. *Coöperation and the future of industry.* (New York: Macmillan. 1919. Pp. 141. $2.)

This is a solid contribution to the study of consumers coöperation. From The Roots of the Movement it carries the analysis into those aspects of the question that have left such confusion in most American literature on this subject. If any intelligible meaning is ever to get into that phrase now upon every tongue—"democratizing industry"—very clear distinctions have to be made among a whole order of conflicting interests. The coöperators who have done more than any or all others to show the possibilities of democracy in business are those who approach it from the side of consumers. It required more than a generation of experiment and overheated discussion to clear up these understandings. Labor copartnership in all its forms; farmers, selling societies, citrus fruit associations, even bonus systems and profit sharing have been hopelessly jumbled with Rochdale coöperation. This book brings out these distinctions with admirable lucidity. What Beatrice Potter did nearly a quarter of a century ago in a study which Schmoller called "road-breaking in importance," this author carries out and brings up to date.

For the first time in the United States the tide of a working-class Rochdale coöperation is rising on a scale that has real promise. In the world turmoil, it is probably the most *conservative* movement now observable—conservative because it throws upon labor groups sharp and specific business responsibility. Except to take profits in the capitalistic sense, labor has to do about everything done in ordinary business. To succeed, it must outmatch capitalistic management in its own field. Much smug advice is being given to labor about its behavior. It will take very little of it. Labor is now to try its own hand in business and in politics. If it has more special need of "education" than any other class, this form of coöperation will furnish it more directly and more wholesomely than all other agencies combined.

The final chapter, on Coöperators and Political Action, carries the author into utopian expectations which will rouse criticism. He looks toward an industrial future directed almost absolutely by consumers. He does not flinch from the logic of this position. We must have "conscription of labor" (reminding us of William James's well known suggestion) in order to get the necessary amount of production, especially to get the harder and more distasteful labor performed. His harmonizing of interests between producer and consumer is too easily done. It not only runs counter to the whole mass of profit-making business, but quite as sharply against radical labor in the Syndical and New Guild movements. This flight toward things millennial should not, however, detract from the debt we owe to this study.

John Graham Brooks.

Les chefs socialistes pendant la guerre. (Paris: Nouvelle Librairie Nationale. 1919. 4.55 fr.)

The replies of the socialist parties of the Central Powers to the "memorandum on war aims." The preliminary draft of a peace programme by a committee of neutral socialists. An open letter on the "new socialist peace conference" from M. P. J. Troelstra to the Right Hon. Arthur Henderson. (London: Labour Party, 33 Eccleston Square. 1919. Pp. 71. 6d.)

Statistics and Its Methods

Disabling Sickness Among the Population of Seven Cotton Mill Villages of South Carolina in Relation to Family Income. By Edgar Sydenstricker, G. A. Wheeler, Joseph Goldberger. Reprint 492 from the United States Public Health Reports, vol. XXXIII. (Washington: Superintendent of Documents. Nov. 22, 1918. Pp. iv, 2031-2091.)

When Thomas R. Malthus published his treatise on population, he gave scientific form to the general belief that poverty and disease are inseparable companions. Since that date, this fact has probably been tacitly accepted by most thinking people; nevertheless, statistical proofs and mathematical measurements of this relationship have been most scanty, and, strangely enough, while everyone has been perfectly ready to admit that the relationship exists, it has in practice been virtually overlooked by many able investigators. Insurance actuaries, for example, have worked out elaborate tables to show the relationship of sickness and mortality to age, sex, and occupation, while ignoring entirely the income status of the individuals studied. This tendency has doubtless been accentuated by the difficulties involved in obtaining reliable information concerning income.

The authors of the pamphlet here reviewed recognized these difficulties fully and made a systematic effort to overcome them which proved completely successful. Family income was estimated by first getting the wages of mill workers from the payrolls and then adding thereto income from other sources as calculated from detailed estimates furnished by each family. But, since families differ greatly in size, total family income was useless as a criterion of welfare. Before it could be utilized, it was essential that the size of the family should be determined and that the total income in each instance should be divided by the relative size of the family. Since persons of different ages and sexes have decidedly different needs for articles of consumption, the mere number of persons in

a family is far from being a satisfactory gauge of the size of the family. As a result, it was decided to rate the size of each family in proportion to the number of "adult male units" that it contained according to the Atwater scale. This scale, while originally computed upon the basis of *food requirements*, is, nevertheless, roughly proportional to the *general needs* of persons of different ages and sexes. The income for each family for a half-month period was divided by the number of adult male units in that family. The families were then classified according to income per adult male unit and the sickness rate calculated for each class. Sickness was defined, not in terms of pain, but as inability to perform one's usual duties. The study covered 4,161 persons in 747 households of cotton mill workers, a number large enough to constitute a reasonably fair sample. It must be kept in mind that none of the families are more than moderately well-to-do and the conclusions, therefore, probably characterize the poorer classes rather than the general population of the United States. The results of the inquiry are most striking, as the following table shows.

CASES OF DISABLING SICKNESS PER THOUSAND PERSONS OCCURRING AT A GIVEN CENSUS DATE IN THE LATE SPRING OF 1916 IN SEVEN COTTON MILL VILLAGES OF SOUTH CAROLINA.

Half-month family income per adult male unit	All persons	Wage-earning persons	Non-wage-earning persons
All incomes	45.2	40.2	49.1
Less than $6.00	70.1	80.0	65.0
$6.00 to $7.99	48.2	51.6	45.8
$8.00 to $9.99	34.4	18.8	53.1
$10.00 and over	18.5	14.9	22.5

It thus appears that the sickness rate of the poorest class was approximately four times as great as that of the most prosperous class and that the difference was maintained for both wage-earners and non-wage-earners, though it was somewhat more marked in the case of the former. Supplementary tables in the bulletin show that the same higher rate appears for nearly all of the various ages and sexes and for non-mill workers as well as for mill workers. This proves that the inverse relationship existing between income and sickness is real and not merely apparent.

In collecting the original data, when cases of sickness were found, an inquiry was made as to how long the sick person had

been incapacitated. These figures, when analyzed, show very distinctly that the illnesses among the well-to-do families were normally of much briefer duration than were the illnesses of the poverty stricken.

The authors very wisely caution the reader against assuming that the figures here given prove that poverty is the dominant cause of sickness. As a matter of fact, it is doubtless true that some of the poverty is caused by illness of those supporting the family, resulting in their inability to earn wages. To a larger extent, probably, poverty arises from low earning power, due to low efficiency, and this in turn is a product of a varying mixture of bad heredity, improper nourishment, and lack of education, the last two of which are caused largely by poverty. And so the endless chain moves on!

But this does not at all detract from the value of the facts presented. The investigation appears to demonstrate quite conclusively that, whatever the causal sequence, poverty and disability go hand in hand. It follows, then, if health conditions are so closely bound up with the economic circumstances of the persons under consideration, that conclusions derived from any study of sickness rates which fails to take account of family income must, necessarily, be subject to grave doubts as to their validity.

On the whole, the study furnishes a valuable contribution from the point of view of the economist as well as from that of the scientist interested primarily in questions pertaining to health.

WILLFORD I. KING.

Spartanburg, S. C.

Introduction to Mathematical Statistics. By CARL J. WEST. (Columbus: R. G. Adams and Company. 1918. Pp. 150.)

This attractive book should appeal to every worker who deals with any kind of statistical material. Among its noteworthy features are: a clear exposition of the best methods of plotting data, smoothing curves, and testing goodness of fit, with applications to fluctuations of prices, rainfall, yield of crops, etc.; a careful explanation of the significance of a frequency distribution, and of the various weighted averages, more especially the standard deviation from the mean, and the use of the normal frequency (or probability) curve in various statistical problems; an unusually complete and lucid treatment of the three chief indices for measuring the degree of relationship between two varying characteristics, namely, the correlation ratio, the coefficient of corre-

lation, and the coefficient of contingency, showing to what kinds of material the three methods are respectively appropriate, and giving their practical significance, with various useful cautions, and a section on spurious correlation; also a welcome chapter on the methods of moments, and its application to curve fitting, with simplified processes for computing the moments of different orders and checking results.

No knowledge of calculus is assumed except in appendix I, which gives an excellent summary of Karl Pearson's formulas for smoothing data by fitting the generalized frequency curves of appropriate type. It may be well to warn the reader that in some of the formulas the printer has confused the Greek letters γ and ν, and that in the enumeration on page 138, type II in the fourth line should be type VII with $\beta > 3$, and type VII should be type VI. The classification adopted is that given by Pearson himself in *Tables for Statisticians and Biometricians* (1914), and differs somewhat from earlier classifications.

In the second edition it would, perhaps, be desirable to insert another appendix presuming an elementary knowledge of calculus, and giving a proof of the equation of the normal probability curve, and the resulting principle of least squares. It would then be possible to show that the method of moments used in determining the line of regression in the chapter on correlation, furnishes the most probable value of the slope of that line; also that in fitting parabolas of any order the method of moments gives the same result as the method of least squares, and hence gives the most probable fit, a fact which originally suggested to Professor Pearson the extension of the method of moments to cases where the method of least squares is not applicable.

A slight knowledge of calculus would also enable the student to understand the important "law of propagation of error" by which one can find the probable error of a function of several variables whose respective probable errors are given.

Another useful statistical formula which could be included is that of Bernoulli, which gives the frequency of a given random deviation from the normal (or expected) number of successes in repeated trials. This would furnish an approximate answer to such practical questions as the following: In a town of 15,000 inhabitants the normal annual death rate is 14 per thousand; but in a certain year it was 16 per thousand; what are the odds against a deviation as great as this being due to pure chance, without any significant change in sanitary conditions?

There is no dearth, however, of practical statistical examples and exercises in this interesting book. They are well graded to illustrate the various principles in the text, and should make the work very welcome to instructors of college classes as well as to statisticians in general.

JAMES McMAHON.

The Mathematical Theory of Population, of its Character and Fluctuations, and of the Factors which Influence them. By G. H. KNIBBS. Appendix A, Volume 1, Census of the Commonwealth of Australia. (Melbourne: Commonwealth Statistician. 1917. Pp. xvi, 466.)

The author says in his foreward that this monograph "aims on the one hand at supplying the elements of a mathematical technique, such as are needed for the analysis of the various aspects of vital phenomena that come under statistical review, and, on the other, at interpreting material made available by the first Census of Australia which has been carried out upon uniform lines and by a central authority." The results of the study "have brought into clearer relief the necessity for recognizing that the variation of any one statistical element affects all other statistical elements, so that the satisfactory reduction of 'crude data' to a common system is by no means an easy undertaking, and the comparability of the statistic of two communities can never be rigorously exact in all particulars."

The scope of this highly technical mathematical analysis may be gleaned from a brief description of its contents. The first eight chapters are devoted mainly to method, such topics as the following being discussed: types of population fluctuations; curve constants and intermediate values; types of curves and their characteristics; group value and integration for statistical aggregates; the place of graphics and smoothing in the analysis of population statistics; conspectus of population characters.

In these chapters primary emphasis is given to the development of mathematical formulas to describe population distributions and the curves which represent them. Among other things discussed are types of population fluctuation, note being taken of the determining factors which secularly influence rate of population increase. A large amount of comparative data on population growths is given for the important countries of the world and the likelihood and consequence of such a rate continuing are pointed

out in detail. Especially worth noting in this part of the volume is the discussion of smoothing statistical data. The fact that general impressions that are often unwittingly or purposely conveyed by a free use of smoothed curves is sufficient justification for quoting briefly from the volume on this point.

There are four principal classes of data to which the process of curve-smoothing is applicable. These may be indicated as follows:

(i.) Frequencies of a phenomenon at successive epochs or during successive periods of time; as, for example, population estimates at given dates and numbers of deaths occurring during successive years.

(ii.) Rates of occurrence of a phenomenon per unit of reference during successive periods; as, for example, birth-rates per thousand of population per annum for successive years.

(iii.) Frequencies in respect of successive values of characters capable of continuous variation; as, for example, the number of persons at each age recorded at a given census.

(iv.) Rates of occurrence of a phenomenon per unit of reference in respect of successive values of characters susceptible of continuous variation; as, for example, rates of mortality per unit per annum during a given decennium in respect of each age.

In all these cases the characteristic of continuous variation is assumed to exist either actually or virtually. Where statistical results are *discontinuous* such a process is, strictly speaking, inapplicable; as, for example, in the tabulation of census population according to birthplace, occupation, or religion. In some cases, however, although the data are strictly speaking discontinuous, the principle may be applied partially; for example, in the case of a tabulation of dwellings according to number of rooms or according to number of inmates. In such cases the character possessed is *progressive without being continuous;* nevertheless, with proper qualifications, the smoothing principle may be applied even to these.

Object of smoothing.—From the foregoing it will be seen that the data to which the smoothing process is strictly applicable are those which may be regarded as functions of a continuous variable. . . . The essence of the matter is that in any instance the data are in the main such as admit of representation by means of a continuous line, or a continuous surface or solid in relation to continuous units of reference. When such representation has been made of the crude results of observation, it is ordinarily found that the line surface or solid exhibits evidence of marked irregularities as between adjacent points or series of points, their general trend, however, suggesting an underlying basis of orderly progression. This progression is, of course, affected by minor influences operating at individual points, and is more or less masked by the paucity of the data on which the representation has been based; thus, suggesting further that were it possible to obtain data of unlimited extent, these irregularities would become neg-

ligible. For this reason the object of the smoothing process may be said to be that of removing these apparently accidental irregularities, and of thus disclosing the basic or ideal uniformity which may be presumed to represent the facts in all their generality.

Justification for smoothing process.—The justifications for the smoothing process may thus be said to be:

(a) That the irregularity does not represent the phenomenon in its generality, since much of the observed irregularity is known *a priori* to be due only to paucity of data;

(b) or that it is known that the phenomenon subject to observation is really regular;

(c) or, again, that the observed data suggest that regularity of trend will not efficiently represent them.

It has been objected that any system of smoothing is, strictly speaking, unwarrantable, since such a process virtually attempts to make the facts accord with more or less questionable preconceptions regarding them. To this view it may be rejoined that if the process were such as to produce results which, though smooth, differed systematically and materially in their distribution from the original observations, the objection would be valid. Where, however, due consideration is given to the relative magnitudes of the original data, and the smoothed results accord therewith as closely as the data will allow when these exhibit a general trend, then the only preconception that can be regarded as operative is the justifiable one that ordinarily natural phenomena do not progress *per saltum*. In this connection it must be noted that where there is distinct evidence at any stage of a cataclysmic disturbance of results, the smoothing process for such points or periods will usually be invalid or not properly applicable. . . .

One of the most cogent justifications for the smoothing process has its warrant in the fact that the recorded results of any statistical observations are necessarily approximative, and hence that the value of the function *recorded* for any given value of the variable is probably not usually more accurate than an estimate based on the recorded values in respect of preceding and succeeding values of the variable. This consideration suggests the idea of weighting successive observations to obtain most probable values, which idea forms the basis of one of the leading methods of adjustment. Again, where the results of the observations are to be employed as guides to future action, it is clear that these results should, as far as practicable, be freed from all fluctuations which may be considered merely accidental, and thus unlikely to be reproduced in future experience. This is of considerable importance in connection with the construction of mortality and sickness, superannuation, and similar tables to be used in the computation of rates of premium, and for the conduct of valuations.

Later chapters are given over to description of the Australian population according to sex and age; masculinity; natality; nuptiality; fertility and fecundity and reproductive efficiency; mortality; migration, etc. This part of the discussion is likewise mathe-

matical and unique in studies of population. Nowhere else, so far as the writer's knowledge goes, can there be found, for instance, such a fundamental and critical analysis of error, as is encountered in statistics of birth, marriage, and divorce, given in this monograph. A unique feature of the discussion is the treatment of migration. Under this head are discussed such topics as correlation, owing to migration, between age and length of residence, periodic fluctuations in migration, migration and age, etc.

It is impossible within the short compass of a review adequately to deal with the scope and merits of this monumental piece of statistical technique. The author's concluding words, however, may be quoted to indicate his own conception of its purpose and of "the larger aim of population statistic."

> At present there exists a large and accumulating mass of unanalysed material. Numerical data have in many instances already become a burden, and in other cases threaten to become one. But when their significance has been penetrated they seem no longer tedious; they have been transformed into illuminating and interesting facts.
>
> Here, however, we need a word of warning. The problem of all so-called knowledge is to subsume what we know—or think we know—under suitable elementary conceptions, conceptions, in fact, that are within our intellectual grasp, and that we can mentally handle. As in physics the Boyle-Charles gaseous laws, the molecular law of equal numbers in equal volumes at equal pressures and temperatures, and the conception of mass as independent of velocity, are but crude statements of the actual facts, so crude that their elementary simplicity entirely disappears when necessary qualifications are made, so likewise does a deeper knowledge of statistic reveal that relations subsisting among crude data are subject to corrections that, not infrequently, are very elaborate. The more simple and obvious of these relations constitute a kind of rough frame-work about which more subtle and accurate conceptions may cluster, or, to change the figure, they are a skeletal foundation on which the body of justly conceived statistic is to be built up.
>
> Anyone who has seriously reflected upon the facts of the last ten decades must realise that, within the next ten, tremendous problems will arise for solution and these will touch fundamentally the following matters, viz.:
>
> (i.) The multiplying power of the human race;
> (ii.) The organic constitution of Nature and the means at human disposal for avoiding the incidence of its unfavorable aspects; *i.e.*, eugenics in its wider sense;
> (iii.) The enhancing of the productivity of Nature, and the limits of its exploitation;
> (iv.) The mechanism of the social organism, and the scheme of its control;
> (v.) Internationalism and the solidarity of humanity.

For the adequate study of these matters, not only will the mere technique of the collection and analysis of statistic require to be much advanced, but the popular opinion as to the value of the effort will also have to progress. Given, however, an intelligent public opinion, as to the utility of statistical inquiries, there would be some ground for hope that the great questions, the analysis of which would throw light upon human destiny, could be properly attacked. It is for educational departments, worthy of the name, to create such opinion by the mechanism of their systems, in order that each human being should be sufficiently interested to cordially co-operate, by accurately furnishing the necessary data in the taking of a census of population or wealth. Census-taking is a costly operation, but it is the foundation of all branches of statistic that have a direct human interest. Its value and the facility of using it would be immensely increased if it were meticulously accurate. The importance of technique and of precision, matters apparently of little moment, can be rightly estimated only when the ultimate aim of all statistical inquiry is realised to be 'the study of man's destiny' as the denizen of a world of limitations.

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NEW BOOKS

HOFFMAN, F. L. *Army anthropometry and medical rejection statistics.* (Newark, N. J.: Prudential Ins. Co. 1919. Pp. 114.)

MACDONALD, A. *Anthropometry of soldiers.* Reprinted from the *Medical Record,* Dec. 14, 1918. (New York: William Wood & Co. 1918. Pp. 17.)

TRIVETT, J. B. *The official year book of New South Wales, 1917.* (Sydney: Bureau of Statistics. 1918. Pp. 843. 2s. 6d.)

Census of war commodities. Statistics of leather. (Washington: Bureau of the Census. 1918. Pp. 13.)

Eidgenössisches statistisches Bureau. Statistisches Jahrbuch der Schweiz, 1917. (Bern. 1918. Pp. 371.)

Statistical year book of Quebec, 1918. Fifth year. (Quebec: Bureau of Statistics. 1918. Pp. xiii, 565.)

DOCUMENTS, REPORTS, AND LEGISLATION

Industries and Commerce

THE CANNED SALMON INDUSTRY. The report recently issued by the Federal Trade Commission (*Report of the Federal Trade Commission on Canned Foods: Canned Salmon,* Washington, December, 1918, pp. 83, 10c.) shows that in 1917, there were 8,627,453 full cases (414,117,744 pounds) of salmon packed by American canners, over 90 million fish being used in filling this number of cases. The fixed investment in the industry (exclusive of borrowed funds, which amount to almost as much as the fixed investment) is over $31,000,000. The 1917 pack at the August prices was worth approximately $72,000,000.

The location of the canneries and the success or failure of any particular venture depends largely upon the supply of the raw material, fish. The fresh fish are highly perishable and hence the canneries must be located near the fishing grounds. The industry started in California in 1864 and has been moving north ever since. In 1917 approximately 70 per cent of the output was canned in Alaska, and 20 per cent in the western part of Alaska. The canneries are generally located in out of the way places and many Alaska canners must transport all supplies and laborers hundreds of miles to the canneries. This transportation cost is often a material item. In 1917 it averaged 81 cents per case or 16.7 per cent of the total cost of production for the west Alaska canners.

The supply of raw fish is limited by nature and the fish are found abundantly only in certain places. The catch in any particular stream in any particular year is uncertain. As the number of good trap locations is limited, canners controlling such locations have a decided advantage over other canners in being able to secure their raw fish more cheaply. Licenses for trap locations are good for four years in Puget Sound, but for only one year in Alaska. Apparently there would be a scramble for good locations each spring in Alaska. Squatter sovereignty, however, rules and a site is seldom "jumped" as long as the "owner" operates a trap there. The charge for these locations is nominal.

The canners, however, would like to have greater security in their rights to such locations. Two laws were introduced in the last Congress to regulate salmon fishing in Alaska. The Sulzer bill provided for 5-year leases which might be renewed at the end of each period. The Alexander bill provided for 15-year leases, upon the expiration of which the sites could be leased to any applicant by the United States.

The commission expressed itself as opposed to allowing lessees to renew their leases for successive periods in such a way as to keep all others out and also felt that a tenure of fifteen years was too long and would tend towards monopoly.

The successful operation of a salmon cannery depends to a large extent upon the ability to secure an adequate and cheap supply of fish. A canner may secure a large quantity of fish one year and a very small quantity the next. A force of laborers, together with supplies of cans, boxes, fuel, food, etc., sufficient for a season's operations must be provided. In case of a small run of fish, the cans and boxes can be carried over to the next year; but the wages of the laborers, the plant overhead, depreciation and general expenses are practically the same regardless of the size of the pack. This means low unit costs when the pack is large and high unit costs when the pack is small. As a result profits fluctuate widely from year to year. The situation is somewhat different for a canner who is located in a settled community. Such canners often purchase their fish from independent fishermen and are able to secure their labor from nearby towns as needed. However, in case of a small run of fish in this section competition between canners and fresh fish buyers is likely to force them to pay high prices for their fish and they may be unable to secure enough for the efficient operation of their plants.

There is no uniformity in the costs of the different canners. The costs of production (exclusive of marketing expense) in 1916 ranged from $1.85 to $12.27 per full case (48 lbs. of meat) while in 1917 the costs ranged from $1.33 to $26.21. In 1916 the average cost was $3.61 per case. Fifty per cent of the production was canned at costs below $3.50, 18 per cent was packed at costs between $3.50 and $4, and 10 per cent was packed at costs between $4 and $5. The remaining 10 per cent was packed at costs above $5. In 1917 the average cost was $4.43 per case. In this year 53 per cent of the total production was canned at costs below $4.50, 10 per cent at costs between $4.50 and $5, 15 per cent at costs between $5 and $6, 8 per cent at costs between $6 and $7, 7 per cent at costs between $7 and $8, and 9 per cent at costs above $8. The modal cost group was from $3 to $3.50, well below the average, but only 17 per cent of the total fell within this group. (The average cost figures are based on one half of total production. The other cost figures are based on 84 per cent of total production in 1916 and 89 per cent in 1917.)

The plants with large packs have lower costs than the plants with small packs. The report makes a comparison of the costs of produc-

tion at large and small plants, taking a production of 50,000 cases as the dividing point. The large canneries had an average cost 62 cents below the small canneries in 1916 ($3.49 compared with $4.11 per case). In 1917 the costs of the large plants were $1.38 below the costs of the small plants ($4.30 compared with $5.68 per case). The large plants had lower unit costs for every important cost item, but had the greatest advantages in the unit costs of fish and labor.

A canner with several plants may be called a "compound company." The compound company has an advantage over a canner with only one plant ("simple company") in that he can equalize or absorb local losses without incurring a deficit. Thus a company with six plants lost $115,000 at one plant in 1917 and yet made a total profit of over $1,000,000. A large canner is able to own a fleet and thus can transport men and supplies from one plant to another as necessitated by the size of the runs at the different plants. A canner operating several plants is also able to secure the best trap locations and to obtain the seasonal credit needed on better terms than the small canner whose profits are more uncertain. These advantages, however, do not always result in lower costs of production. A comparison of the costs of large and small companies was made, regardless of the production or size of their plants. The large companies secured their fish and containers cheaper than the small companies, while the small companies had lower labor and overhead costs. In 1916 the average cost of 21 small companies was 18 cents below the average cost of 8 large companies. In 1917, however, the average cost of the large companies was 49 cents below the average of the small companies. This was due to the fact that the large companies secured their fish for 75 cents less per case than the small companies. The saving of the small companies on labor and overhead could not overcome this great handicap.

It is clear from these facts, that the large companies are no more efficient in their operation than the small companies and that any advantage that they may possess in the cost of production is in their ability to secure their fish and containers more cheaply. Their advantage in securing fish appears to be due to their control of the best trap locations or the location of their plants in sections where fish are more plentiful. Their advantage in securing containers is based on their ability to negotiate favorable purchase contracts with the can companies, or to manufacture their own cans economically. Concerning large and small companies, the report says:

It seems reasonably clear, then, that the large companies have shown no exceptional efficiency and that their size has redounded to their own advantage

rather than to that of the public. In this industry large and efficient plants rather than large companies, . . . would be socially desirable. A further centralization of control, therefore, could offer no economies which would balance the dangers of monopoly in the industry.

Salmon canners as a rule do not have a large enough volume of sales to justify the maintenance of extensive sales organizations. Many of them are located in small villages and are out of touch with the large markets. For this reason nearly all canned salmon is sold through brokers. Most of these brokers have exclusive sales contracts with several canners. They are then known as selling agents. Such agents often finance the canners and have complete control of the marketing of their product.

Many of these brokers own or directly control one or more canneries, act as selling agent for several canners, and do a general brokerage business for other canners with whom they have no general sales contracts. The report shows that, in 1917, 46 per cent of the canners sold their entire pack through sales agents, 16 per cent sold their entire pack through brokers, and only 3 per cent sold their entire pack direct to jobbers or brokers. The other 35 per cent of the canners did not sell their entire packs in any one way, but it is noteworthy that 66 per cent of the canners effected no direct sales of any of their product.

There are a few large companies or groups of companies which dominate the salmon canning industry. Each of these large companies is connected with a large broker or other kind of distributor. These brokers control the sale of the product of a number of canning companies. The large companies often own stock and make loans to other companies. The stockholders in one company frequently control other companies. In these ways many canners are closely bound together into groups dominated by one company or one man. There were five such groups which in 1917 packed 53 per cent of the year's production. Some of the Chicago meat packers have extensive interests in the salmon canning industry and at least two of the above groups are dominated by Chicago meat-packing firms.

Very few of the Pacific coast salmon brokers have sales organizations extending over the country and consequently they effect their sales through brokers located in other cities, paying them a sub-brokerage. The ordinary brokerage on canned salmon is 5 per cent (although commissions of from 2½ to 13½ per cent were reported), about one half of which is paid out as sub-brokerage. A few canners have established direct connections with Eastern brokers and so have to pay only 2½ or 3 per cent brokerage. The commission did not

believe that it was practical for the canners to sell direct to the wholesale grocers but did think it practical for the medium and large sized canners to establish direct connections with Eastern brokers and to reduce the amount of brokerage paid by one half.

The canned salmon industry offers an example of an industry in which the larger companies determine the prices which are followed pretty closely by all producers. In August "opening prices" are named at which the canners will "open" business for their goods then being packed. Since 1905 nearly all canners naming opening prices have followed the prices made by the Alaska Packers' Association or by the brokerage firm of Deming & Gould.

The Alaska Packers' Association generally names prices for all grades except sockeyes, the price of which is usually named by Deming & Gould. The Alaska Packers' Association is principally interested in the Alaska product, while Deming & Gould have very large interests in Puget Sound, where the costs are higher. For this reason Deming & Gould opened prices on all grades in 1917. Although the president of the Alaska Packers' Association was in favor of somewhat lower prices he followed those named by Deming & Gould in order not to demoralize the market. The weighted averages of the opening prices per full case were $5.14 in 1916 and $8.33 in 1917, or an increase of 62 per cent. The increase in the average cost of production was 23 per cent. The 1916 opening prices were high enough to cover the cost of production and selling for approximately 87 per cent of the season's pack, while the 1917 prices would allow approximately 94 per cent of the year's production to be sold without a loss.

The Alaska Packers' Association with its affiliated companies packed 18.4 per cent of the total production in 1917 and the Deming & Gould group of companies packed 11.4 per cent. These two groups of companies together packed only 30 per cent of the entire year's production. Yet the prices named by one of these companies on a particular grade is followed by practically the entire industry. This shows how a company, larger than any of its competitors, even though controlling only a small part of the total production can determine the prices for the entire industry.

Prices high enough to yield a profit on 90 per cent of the total product mean very high prices for most producers. The average net profit on investment was 22.1 per cent in 1916 and 52.7 per cent in 1917. The average net profit on net sales was 18.5 per cent in 1916 and 34.1 per cent in 1917. As the range of costs was great, the net profits of individual canners naturally varied widely. Out of the 76 companies reported upon in 1916, ten showed a loss and 66 showed

a profit. Out of the 66 showing a profit, 33 made over 25 per cent and 3 made over 100 per cent on investment. The largest loss was 70 per cent and the highest profit was 168 per cent. Out of the 90 companies reported upon in 1917, 12 showed a loss and 78 showed a profit. Of the 78 showing a profit, 33 realized over 50 per cent and 11 made over 100 per cent on investment. The greatest loss reported was 69 per cent, while the highest percentage of profit realized was 239.

PAUL D. CONVERSE.

Washington, D. C.

The Bureau of Foreign and Domestic Commerce of the United States Department of Commerce has recently issued the following volumes:

Special Agents Series:

No. 172, *Electrical Goods in China, Japan, and Vladivostok,* by R. A. Lundquist (Washington, 1918, pp. 197). This contains an analysis of markets for electrical goods and methods of conducting trade in these countries. It also has considerable general economic information in regard to the Orient.

No. 173, *Shoe and Leather Trade in China and Japan,* by C. E. Bosworth (pp. 37).

No. 174, *Markets for Boots and Shoes in Chile and Bolivia,* by H. G. Brock (pp. 192). This, like the previous issues, has general economic and commercial description.

No. 175, *Construction Materials and Machinery in Chile, Peru, and Ecuador,* by W. W. Ewing (pp. 205).

No. 176, *Furniture Markets of Chile, Peru, Bolivia, and Ecuador,* by H. E. Everly (pp. 165).

Miscellaneous Series:

No. 64, *Wholesale Prices of Leading Articles in the United States Markets,* 1917 (pp. 14).

No. 70, *The Conduct of Business with China* (pp. 47).

No. 74, *Wearing Apparel in Peru,* by W. F. Montavon (pp. 64).

Other reports of the Department of Commerce are *Annual Report of the Secretary of Commerce, 1918* (pp. 157), and *Annual Report of the Commissioner of Fisheries, 1918* (pp. 94).

The United States Tariff Commission has published as Tariff Information Series No. 9, *Costs of Production in the Sugar Industry* (Washington, 1919, pp. 55). The pamphlet is intended mainly to show (1) the effects of the war upon sugar costs and prices, (2) the

necessity for government price regulation, (3) the probable effects of recent and proposed tariffs and excise taxes upon sugar costs, prices and production in the various continental and insular sugar areas of the United States and in Cuba. It carries to the close of the sugar year of 1917-1919 much of the data contained in three previous official reports, namely, *The Sugar Industry,* issued by the United States Department of Commerce in 1913, *The Cane Sugar Industry,* issued by the same department in 1917, and *The Beet Sugar Industry in the United States,* issued by the Federal Trade Commission in 1917.

ROY G. BLAKEY.

The United States Tariff Commission has also published a monograph on *Japan: Trade During the War,* which covers the years 1913-1917 with special reference to commerce with the United States. The report is divided into three sections: development of Japan's foreign trade prior to the war, going back to 1856; expansion of Japan's foreign trade during the war; and trade between Japan and the United States. Another volume, *Reciprocity and Commercial Treaties* (pp. 535), will receive more adequate notice in the next issue of the REVIEW.

The *Second Annual Report of the United States Tariff Commission for 1918* (Washington, 1919), gives in Appendix 4 specimens of tariff information catalogs on which the commission has been for some time engaged. Those reprinted deal with: bleaching powder (pp. 47-58); cotton gloves (pp. 59-74); quicksilver (pp. 75-94); rails (pp. 95-118). These catalogs will be of great value to students of commercial and manufacturing conditions. They contain a description of the industry and processes, imports and exports, world production, analysis of competitive conditions with brief bibliographies. Several pages are devoted to a list of the catalogs which are under preparation.

The Bureau of the Census has published Bulletin 137, *Cotton Production and Distribution, Season of 1917-1918* (Washington, 1918, pp. 135). There are maps showing the amount of cotton ginned in the several states in 1917.

The *Annual Report of the Chief of the Bureau of Foreign and Domestic Commerce* for the fiscal year ended June 30, 1918 (Washington, pp. 93), summarizes the work of the various divisions of the department.

The Annual Report of the Commissioner of Navigation for 1918 (Washington, pp. 237) reviews the progress of ship construction during the preceding year.

The hearings held in December and January before the House

Committee on Interstate and Foreign Commerce on *Government Control of the Meat-Packing Industry* have been issued in two parts (pp. 215).

The testimony of J. Ogden Armour on behalf of Armour and Company, January 21, 1919, in the investigation of the packing industry has been published as a reprint by the Armour Company (pp. 64).

The *Second Annual Report of the United States Shipping Board* gives a full account of the activities of this board and also of the Emergency Fleet Corporation (December 1, 1918, pp. 212). A report by the chairman of the board, Edwin N. Hurley, on *World Shipping Data: Report of European Mission* (Washington, Mar. 1, 1919, pp. 32), presents data in regard to shipbuilding costs abroad. Also a series of pamphlets has been issued as follows:

Why Our Ships Will Now Stay on the Ocean, by E. N. Hurley (pp. 14).

World Trade, a List of Books on World Trade (1918, pp. 8).

Ships and the Ocean, a List of Books on Ships, Commerce, and Merchant Marine, (1918, pp. 7).

Part 8 of the hearings before the Senate Committee on Commerce, relating to the *United States Shipping Board Emergency Fleet Corporation,* contains the testimony of Matthew C. Brush, president of the American International Shipbuilding Corporation (Washington, 1919, pp. 407), and presents many interesting photographs and charts.

The United States Department of Agriculture has issued the following bulletins:

No. 721, *The Beet Sugar Industry in the United States,* by C. O. Townsend (Nov. 22, 1918, pp. 56).

No. 726, *Farm Practice in Growing Beets for Three Districts in Colorado, 1914-1915* (pp. 60).

No. 742, *Production of American Egyptian Cotton* (pp. 30).

No. 755, *Geographical Phases of Farm Prices: Oats,* by R. B. Zapoleon (pp. 28). This has maps showing the usual geographical variations in producers' prices within the United States and the normal geographical variations in producers' price.

No. 770, *Motor Transportation for Rural Districts,* by J. H. Collins (pp. 32).

The American Relief Administration, of which Mr. Herbert Hoover is director, has issued Bulletin No. 1 on *German Food and Trade Con-*

ditions, by A. E. Taylor and Vernon Kellogg (New York, 115 Broadway, Apr. 15, 1919, pp. 24).

The *Report of the New York State Food Commission* for the period October 18, 1917, to July 1, 1918 (Albany, 1919, pp. 153), contains a supplementary report for the period ending November 1, 1918. The various phases of food conservation are described.

The Agricultural Experiment Station of the University of Wisconsin has issued a small bulletin, No. 300, on *War Prices and Farm Products*, by H. C. Taylor and S. W. Mendum (Madison, Mar., 1919, pp. 18). It is illustrated by charts showing incomes and receipts of farmers.

The Bureau of the Census has published in the Census of War Commodities series, *Iron and Steel Products* (Washington, pp. 16).

The Bureau of Mines has prepared a collection of typewritten sheets giving excerpts from monthly reports on minerals investigations (Feb., 1919, pp. 43) and containing tables and charts in regard to the production of various minerals.

Corporations

Proposals for a Solution of the Railway Problem. In 1916 Congress appointed a joint committee of five Senators and five Representatives, to prepare a report on the questions of government regulation, railroad efficiency, and nationalization. Hearings were held during 1916 and 1917, but our entry into the war put the matter off indefinitely. Chairman Newlands of the joint committee died late in 1917, and the committee reported briefly to Congress in March, 1918, that no final report would be presented.

In the meantime came the urgent necessity, with the prospect of peace in 1919, that Congress should seek a definite solution of the railway problem. By the Railroad Control act of March 21, 1918, the railways pass out of the hands of the government not later than twenty-one months after the declaration of peace, or by the middle of 1921 at the latest. The railway problem had changed since 1916, some of the difficulties being aggravated, while many new ones were superadded as a result of the war and federal control. Students and observers of the transportation question agreed generally that the time was ripe for a constructive and radically different policy of railway regulation. But what policy?

To secure light on this question the Senate Committee on Interstate Commerce in January and February of this year gave consideration to various plans. Some of the proposals were elaborated in detail before

the committee. Some were formulated as general principles underlying a correct solution, while others took the form of manuscripts filed with the committee. Still others were not formally presented to the committee, but appeared as public addresses, pamphlets, and periodical articles. Some forty separate proposals may be listed as the product of study of the railway problem during the past two years. The problem is still under discussion, and a complete story of the discussion cannot be attempted as yet, but a few of the more elaborate plans laid before the Senate Committee may be singled out for brief analysis here.

Director General of Railroads Walker D. Hines developed a series of proposals during several days' sessions of the committee. The Interstate Commerce Commission sent a representative who spoke authoritatively for that body, only one member of the commission dissenting in part from the presentation. State commissions were heard through three representatives. The railways presented a series of recommendations through officers of the Association of Railway Executives. Railway security holders were represented by men who appeared for two associations of the stockholders and bondholders. Railway labor received a hearing in the persons of representatives of the trainmen's brotherhoods and smaller organizations. Purchasers of transportation service, the shippers, were heard, and presented a number of plans. Several bankers either filed recommendations with the committee, or developed their proposals through outside channels.

Although the plans varied at many important points, analysis reveals the striking fact that the majority of them agreed on a number of underlying principles. There was unanimity regarding the gravity of the problem and the vital necessity of prompt and thorough action. It was recognized that the nation could not survive the post-war period of readjustment without an adequate transportation system, ready and able to meet the demands upon it. Furthermore, there was wide agreement that railway regulation should be fuller and stricter than before. The demand for federal supervision over the issuance of railway securities was voiced in nearly all proposals. There was a fairly consistent demand, except on the part of the state commissions, that burdensome regulation of railway operation and rates by the several states give place to a strong policy of federal regulation of all but local matters. That the railways should be allowed greater freedom of combination and merger, and should be encouraged to a joint use of their facilities whenever in the public interest, was another note struck by a number of proponents. This proposal was made in full recognition

of the fact that it would involve modification of the anti-trust laws, so far as the railways are concerned.

There were, however, many points of difference. The first concerns the future policy of the American people regarding the transportation industry. Shall it remain under private initiative? Shall it be nationalized outright? or, Shall there be a partial step toward nationalization? With but few exceptions, the trend was sharply in the direction of a continued policy of private ownership and operation. Glenn E. Plumb, appearing as an attorney of various railway labor organizations, elaborated a plan whereby the government would purchase the railways and turn them over to labor for operation. Two other men appeared to urge government purchase and operation. With these exceptions, private ownership and operation was generally advocated by the witnesses. Director General Hines, for example, said:

I do not personally believe in Government ownership. I believe there can be a form of radically reconstructed private ownership, with such close Government supervision, including Government representation on the boards of directors, as will give the public and labor all the benefits of Government ownership and at the same time will preserve the benefits of private and self-interested initiative and will avoid the political difficulties which perhaps are inseparable from Government ownership.

The Interstate Commerce Commission expressed itself as follows:

Considering and weighing as best we can all of the arguments for and against the different plans, we are led to the conviction that with the adoption of appropriate provisions and safeguards for regulation under private ownership it would not be wise or best at this time to assume Government ownership or operation of the railroads of the country.

As to the form which railway control should take, there was diversity of opinion. The railway executives advocated the creation of a new Department of Transportation, whose head should be a member of the President's Cabinet. Under this plan the Interstate Commerce Commission would no longer have administrative power, which would pass into the hands of the Secretary of Transportation, while the commission would retain its quasi-judicial functions. The other plans for the most part advocated the retention of the commission, with usually a plea for the extension of its powers, even to the exclusion of state intervention. The Interstate Commerce Commission advocated cooperation between "the federal tribunal" and state authorities through the utilization of the services of the latter by the former "in appropriate instances and to an appropriate extent." Regional commissions operating under the direction of the interstate body were advocated in several plans, such as that of the railway executives, and the plan proposed by S. Davies Warfield of the National Association of Owners of Railroad Securities.

Another point was the consolidation of railways into a limited number of large systems, with a more extensive common use of equipment, terminals, and other joint facilities. Director General Hines advocated regional railway systems. The Interstate Commerce Commission argued for a revision of the limitations upon the united or co-operative activities of common carriers, and advocated mergers to such extent as may be necessary in the general public interest. The railway executives proposed federal incorporation, with a provision for such mergers as should be approved by the Secretary of Transportation.

With regard to rates, recognition was given to the necessity that they should be adequate, although the proposals varied as to the extent to which there should be a definition of adequacy or reasonableness. Director General Hines emphasized the idea of a fair return to the railways, rather than that of reasonableness of rates. He proposed that the government should guarantee a fair return, making up any deficit on the one hand and sharing in excess profits above the return on the other hand. This would shift the burden of securing an adequate rate level from the railways to the government. The Interstate Commerce Commission argued that rates should be such as to provide adequate revenues. The railway executives proposed that there should be statutory provision for adequacy of rates, the term adequacy to cover wage costs and other expenses. The Warfield plan provided that the law should specifically prescribe such a rate level as, adjusted from time to time, should produce an average return of 6 per cent on invested capital. The Plumb or labor plan proposed that rates be adjusted on a sliding scale basis, and be reduced whenever profits rise above 10 per cent of gross operating revenues.

Various proposals were made for the adjustment of wages. The railway executives advocated a tripartite board representing the railways, the employees, and the general public, to investigate wage disputes and make recommendations to the Secretary of Transportation. The Warfield plan vested the duties of a board of conciliation in each of the proposed regional commissions, and provided for the creation of boards of arbitration, with right of appeal to the Interstate Commerce Commission. The labor plan provided for wage boards whose decisions should be final.

Looking over the various proposed plans as a whole, it is clear that they group themselves into three distinct classes. The first group is composed of the plans that depart the least from the general principles underlying railway regulation and operation in the past. These plans recognize the weaknesses of the régime existing prior to federal con-

trol, and seek the elimination of the weak points. They provide for no government partnership in railway affairs, but only such strengthening and unification of government regulation, such modification of undesirable restrictions, and such establishment of a definite rule for rate making, as will result in a strong, well-knit, and efficient transportation system. The railways will continue to benefit from the results of their own operation when efficient, and will suffer when inefficient; the government undertakes no direct financial responsibility. In this group of proposals the most notable are the plans submitted by the Interstate Commerce Commission, the railway executives, and Mr. Warfield of the security holders.

The second group of proposals provide for government partnership to the extent of a guaranteed return on railway investment or capital. The railways still operate their own properties and retain many of the benefits and incentives of private initiative, but the government becomes a silent partner to the extent that it shoulders a certain amount of financial responsibility. It follows that the government will participate in the management, either through representation on the boards of directors or otherwise. In this group are the proposals of Mr. Hines and several of the plans proposed by bankers, providing for a government guarantee, with participation in the profits.

The third group of plans provide for government ownership outright. Aside from two or three general proposals of such a solution, only one definitely elaborated plan of government ownership was presented, that of Mr. Plumb, appearing for railway labor. Even this plan, advocating government purchase of railway properties, does not advocate government operation, but would turn the railway system over to an operating corporation, administered by a board of directors elected in part by railway employees and appointed in part by the President. In brief, the only definite plan of nationalization does not provide for direct operation by the government.

As illustrative of these three groups of plans, the following brief outlines are presented of one plan in each group, the railway executives' plan from the first group, the Hines plan from the second group, and the Plumb or labor plan from the third.

The plan of the railway executives may be indicated as follows:

1. Private ownership and operation.
2. Federal incorporation.
3. Exclusive federal regulation of rates, and supervision of security issues.
4. No new construction except when and as needed.

5. A Department of Transportation, which shall
   (a) recommend policies,
   (b) re-route traffic when necessary,
   (c) readjust the use of terminal facilities, and
   (d) unify the transportation system in a national emergency.
6. Transfer of the executive and administrative powers of the Interstate Commerce Commission to the Secretary of Transportation, the commission to retain quasi-judicial functions, especially as to the reviewing of rates.
7. Carriers to initiate rates, subject to the approval or disapproval of the Secretary of Transportation, who may refer questions to the commission for review. The commission may also hear complaints respecting rates, and shall fix minimum as well as maximum rates.
8. A reasonable, adequate, and sufficient rule of rate making to be specified by statute.
9. Regional commissions to be created under the supervision of the Interstate Commerce Commission.
10. Modification of the Clayton Anti-trust act, and of the limitations on pooling of cars, division of earnings, acquisition of interest in other carriers, rate agreements, and the like.
11. Wage boards to be organized when necessary, and wage costs to be recognized in rate making as an expense.

The Hines plan presented the following fundamentals:

1. Existence of numerous railroad corporations with widely varying financial structures no longer possible.
2. Abolition of the "strong and weak corporation" menace to railway credit and efficiency.
3. Participation of the government, and perhaps of labor, in profits in excess of a comparatively moderate return.
4. Guarantee by the government of a fair return to the railways, with moderate participation in profits in excess of that return.
5. The guaranteed return to be sufficient to preserve railway credit and attract additional capital.

The Plumb plan provided for:

1. Government purchase of railway properties, on the basis of a fair valuation.
2. Operation by a corporation. Other than working capital furnished by the government, the sole capital of this corpora-

tion would be the "operating ability of every employee, from president down to office boy."

3. The board of directors of the operating corporation to be composed one third of directors elected by the appointed railway officials, one third by other employees, and one third appointed by the President of the United States.
4. Rates to be fixed, presumably by the Interstate Commerce Commission, so as to produce operating revenues sufficient "to meet the requirements of the service."
5. Profits to be divided equally between the government and the operating corporation, the latter to pay its share to labor as a dividend.
6. Automatic reduction of rates whenever the government's share of profits are in excess of five per cent of the operating revenue.
7. Control of intrastate traffic left in the hands of local authorities whenever it does not interfere with the proper operation of interstate traffic.
8. Wage settlements through wage boards and boards of adjustment.

Julius H. Parmelee.

Washington, D. C.

Annual Report of Director General of Railroads. W. G. McAdoo has issued nine sections of his annual report for 1918 as Director General of Railroads (Washington, 1918-1919, pp. 159). The sections cover respectively operation, traffic, wages and working conditions, capital expenditures, public service and accounting, suggestions and complaints, law, and inland waterways. An additional section, covering the work of the division of finance and purchases, is in press as this note is written.

The longest section is that on operation, covering 62 pages. It recounts the operating problems faced by the Railroad Administration at the beginning of 1918 and tabulates the results in terms of improvement in coal supply, food distribution, freight congestion, and in the export situation. To accomplish these results, terminals were unified, freight was hauled by the most direct routes, solid freight trains were created, passenger trains were reduced in number, freight cars and car repair shops were virtually pooled, a coal zoning plan was established in coöperation with the Fuel Administration, and other steps were taken toward unification and economy.

As to equipment, plans were drawn for semi-standardized locomotives and freight cars, orders being placed for 1,430 locomotives and 100,000 freight cars of the standardized types. The Car Service Section dealt principally with problems of car handling and forwarding. This section also supervised freight embargoes and permits, the latter being largely of the nature of exemptions from embargo.

The Safety Section was a unit of the Division of Operation; also the Troop Movement Section, which handled 6,496,150 men between January 1 and the armistice, or nearly 21,000 per day; also the Operating Statistics Section, which established statistical standards, compiled the returns, and served as a general clearing house of information; also the Telegraph Section, the Fuel Conservation Section, and the Exports Control Committee, whose functions are indicated by their titles.

The section on traffic is devoted largely to traffic economies and restrictions. Consolidated ticket offices replaced passenger offices formerly in existence, passenger trains were eliminated, time-tables were abridged and advertising curtailed. Uniform methods were installed in respect to many practices, rules and regulations, and the like.

To conserve the car supply, virtually prohibitive demurrage charges were made effective, to prevent shippers from holding cars longer than was absolutely essential.

The most important part of the section on traffic, from the public viewpoint, deals with increased freight and passenger rates. The increases were for the purpose of providing "for the increase in wages allowed, the higher prices that were and are being paid for all materials and supplies, and the rising costs of operation generally." Freight rates were raised 25 per cent in June, and passenger rates about 30 per cent. In addition, express rates were raised 10 per cent in July, and again about 10 per cent on January 1, 1919. In addition, there were changes in individual rates and traffic rules, and consolidation and simplification of tariffs, which affected the rate level. Another activity of the Division of Traffic was to work out a consolidated freight classification, applicable throughout the United States. This classification has not yet received the approval of the Interstate Commerce Commission.

The Division of Labor provided a means to settle questions as between railway officials and employees. The report of the division, probably prepared by its director, a former union chief, rather critically reviews past arbitrations of labor disputes and their results.

General Order No. 27, issued on May 25, increased the wages of all employees earning less than $250 per month, and created a Board of Railroad Wages and Working Conditions, composed equally of railway and labor representatives. This board investigated inequalities or inequities growing out of the general wage increase, and made recommendations to the Director General. Its labors resulted in a number of supplements, amendments, and addenda to General Order 27. Three Boards of Adjustment were also created. The report further discusses progress made during the year in the direction of standardization: standardization of wages, of hours of labor, and of other conditions of employment, such as rules of discipline and maintenance of the seniority principle.

The Division of Labor early took up the question of the closed shop versus the non-union shop, its recommendations being embodied in General Order No. 8, issued February 21, which provided that "no discrimination will be made in the employment, retention, or conditions of employment of employees because of membership or non-membership in labor organizations." Following the issuance of this order new unions were organized on a number of roads.

An important feature is the report of the Women's Service Section, organized August 28. The number of women in railway service grew from 60,555 on January 1, 1918, to 101,296 on October 1. About three fourths were engaged in clerical work. The work of the section was devoted mainly to supervising the hours and working conditions of the women, and to guarding the enforcement of labor laws.

The brief section on capital expenditures outlines the nature of improvements to railway plant and equipment authorized to December 31, 1918, amounting to $1,278,815,000, and the amount actually expended to November 30, less than half the authorized sum.

Under the head of accounting are outlined the necessary accounting changes and standards brought into play by the fact of federal control and operation. The government having leased railway property from several hundred different corporations, elaborate and detailed accounting methods were made necessary, so as to keep the financial relationships between the government and each corporation on a clear and accurate accounting basis.

The Division of Law devoted itself principally to devising a standard form of lease contract between the government and the several railway companies. The division also supervised the taking over or relinquishment of railway lines, handled claims for special compensation in excess of the guaranteed standard return, and attended to general claims and other legal matters.

The section on inland waterways is devoted to the management and results of operation of the several waterways taken over. Results were meager for the most part, although the supplementary service rendered by some of the canals was locally of value. JULIUS H. PARMELEE.

Washington, D. C.

The Bureau of Railway Economics has prepared a typewritten list of references to articles on *Plans Proposed for Future Control and Operation of Railroads* (Washington, Mar. 31, 1919, pp. 25); also a list of books pertaining to government ownership of railways, being a supplement to Bulletin 62. This covers the period between January, 1917, and March, 1918 (typewritten, pp. 38).

The railway question is covered by hearings before the Senate Committee on Interstate Commerce on *Government Control and Operation of Railways,* Parts 1-7 (Washington, 1918, pp. 1338). This testimony covers the period between December, 1917, and January, 1918. Hearings before the Subcommittee on the Committee on Interstate Commerce on *Long-and-Short-Haul on Railroads* held March 14, 1918, have also been printed (Washington, pp. 733). The memorandum submitted to this committee on *Government Control of Railways in Great Britain* appears in a separate pamphlet (Washington, 1918, pp. 56); also *Federal Control of Systems of Communication,* a hearing held July 9, 1918 (pp. 57). Further hearings before this committee, on *Extension of Tenure of Government Control of Railways,* covering the period from January 3, to February 14, 1919, appear in ten parts.

The *Statement of Mr. Samuel Rea,* president of the Pennsylvania Railway System, before the Interstate Commerce Committee, February 20, 1919, has been printed as a separate (Philadelphia, pp. 16).

The New York and Washington Association of Railway Executives has published a preliminary edition of the testimony before the Senate Committee in a volume entitled *Remedial Railway Legislation, 1919* (pp. 279). This has been followed by a supplement containing testimony by J. Kruttschnitt and D. E. Willard(pp. 98).

Among public utility reports have been received:

Twenty-fourth and Final Report of the Boston Transit Commission, June 30, 1918 (Boston, pp. 65).

The Report of the Public Service Commission of Maryland for 1918 (Baltimore, pp. 663).

Wisconsin Railway Commission Reports, Vol. 19 (Mar. 9, 1917-Nov. 12, 1917, pp. 115).

Sixth Annual Report of the State Corporation Commission of New Mexico, 1917 (Santa Fe, pp. 116).

Labor

METHODS OF COMPUTING LABOR TURNOVER. The recent discovery of the extent and costs of labor turnover has brought with it varying methods of computation. In order that a standard practice might be adopted, the National Association of Employment Managers at their annual meeting in May, 1918, adopted the following method[1] which has since been approved by the United States Bureau of Labor Statistics as the basis for its investigations.[2] "To compute the percentage of labor turnover for any period, find the total separations for the period considered and divide by the average of the number actually working each day through the period."

Before criticising this method it is necessary to determine just what is meant by "turnover." Labor turnover is simply the number of men hired by a given business unit to take the places of men who have left. Turnover in this sense is exactly similar to the use of the term by any retail merchant to indicate the disposal of certain units and their replacement by other units.[3] Turnover as such does not begin until replacement occurs.

The percentage of labor turnover is the proportion which these newly hired men who actually replace others form of the average force employed in a given period of time. It indicates the percentage of men which it has been necessary to hire in order to maintain a constant labor force. In itself it indicates nothing as to whether the force itself is being increased or decreased.

In the light of this definition (which I believe would be approved by every student of the problem), the method of computation adopted by the Bureau of Labor Statistics is defective in the following ways:

1. It uses separations rather than replacements as the basis of turnover. The definition of turnover adopted by the Employment Managers Association is indeed as follows:

[1] For a full statement of this report see *Monthly Review*, United States Bureau of Labor Statistics, June, 1918, pp. 172-173. That this method did not introduce uniformity may be seen from the symposium on labor turnover in *Industrial Management*, September, 1918, pp. 239-246 and November, pp. 425-26, in which from five to six different methods were advanced, practically all of which, in the opinion of the author, are wrong.

[2] See "Labor turnover in Cleveland and Detroit," by Boris Emmett, *Monthly Review*, Jan., 1919, pp. 11-30; "Labor turnover in the San Francisco Bay region," by Paul F. Brissenden, *Monthly Review*, Feb., 1919, pp. 45-62.

[3] With the exception, of course, that a high labor turnover means an economic loss to the employer, while a high turnover of goods means an economic gain to the merchant.

"Labor turnover for any period consists of the number of separations from service during that period. Separations include all quits, discharges, and lay-offs for any reason whatsoever."

It is true that in a period in which the working force of the given plant is being increased, separations do roughly constitute the amount of turnover which takes place. Men are being hired not only to increase the net working force, but to take the place of those who have left. It is only in the latter sense that they constitute replacements and enter into turnover. Separations in this case, therefore, do approximately measure replacements. To be absolutely accurate, however, one should subtract the vacated positions which have not been filled from the total separations to secure the number of actual replacements. Such a deduction, however, although ideally necessary may not be practically possible in many instances due to insufficient payroll data.

But the case is different if the labor force is decreasing. Suppose that a given plant decreases its force in a given period of time from 1,000 to 900 and hires no new men. There are 100 separations but no new men have entered the plant. Turnover as such has not occurred. Yet the method adopted by the Bureau of Labor Statistics would show a labor turnover of 100 men. Plainly, therefore, in this case separations do not measure replacements. The number of men newly hired do constitute replacements. It is not correct, moreover, in the case of a declining labor force to deduct the positions vacated but not replaced from number newly hired since those newly hired have replaced some workers even if they have not replaced the particular ones whose positions are vacated.

The proper method, therefore, of determining replacements should take:

a. The number of separations actually replaced as the base in the case of an increasing force.

b. The number newly hired as the base in the case of a decreasing force.

2. It uses the average attendance as the denominator instead of the number actually employed, by the company. The best index of the average number actually employed is not the average attendance but the average number on the payroll.[4] The use of the average attendance as the denominator confuses absenteeism with turnover. Recent investigations show that from 6 to 15 per cent of the working force are

[4] Care should be taken that the payroll does not contain "dead wood," or men who have really left the employ of the company.

absent daily. Yet these men fill positions which are part of the working force and consequently should not be disregarded in computing the average working force. Absenteeism should be treated as a separate item in labor loss and not included in the computation of turnover.[5]

The preceding paragraphs indicate the methods which I believe should be followed: To compute the percentage of labor turnover for any period, find the total replacements for the period considered and divide by the average number on the payroll.

The difference between the method proposed by the author and that adopted by the Bureau of Labor Statistics may be seen from the following two non-algebraic examples:

Example A

COMPUTATION OF LABOR TURNOVER WITH AN INCREASING LABOR FORCE.

1. Given statistics:
   - Number employed at beginning of month 1,000.
   - Number employed at end of month 1,100.
   - Number newly hired 300.
   - Number positions vacated not filled 10.
   - Average daily attendance 900.
2. Method of Bureau of Labor Statistics:

   Number of separations $= 300 - (1100\text{-}1000) = 200.$

   Labor turnover $= \dfrac{200}{900} = 22.2$ per cent.
3. Method proposed:

   Average force on payroll $= \dfrac{1000 + 1100}{2} = 1050.$[6]

   Number of replacements $= 300 - (1100\text{-}1000) - 10 = 190.$

   Labor turnover $= \dfrac{190}{1050}$ or 18.1 per cent.

   Percentage of absenteeism $= \dfrac{150}{1050} = 14.3$ per cent.

Example B

COMPUTATION OF LABOR TURNOVER WITH A DECREASING LABOR FORCE.

1. Given statistics:
   - Number on payroll at beginning of month 1,000.
   - Number on payroll at end of month 900.
   - Number newly hired 25.
   - Average daily attendance 800.

[5] Mr. Boris Emmett, an investigator for the United States Bureau of Labor Statistics, in his article on the "Nature and computation of labor turnover," *Journal of Political Economy*, Feb., 1919, pp. 105-117, has come to believe in the use of hirings rather than separations in a decreasing work force, but he still clings to the use of the average attendance as the denominator. One of his objections to the use of the payroll is that it contains absentees. Of course it does, but these can be computed separately and should not be confused with turnover.

[6] That is, the arithmetic average of the number employed at the beginning and end of the month. The number each week can be averaged if more accurate methods are desired.

2. Method of Bureau of Labor Statistics:

Number of separations $= 25 + (1000\text{-}900) = 125.$

Labor turnover $= \frac{125}{800}$ or 15.6 per cent.

3. Method proposed:

Average number on payroll $= \frac{1000 + 900}{2} = 950.$

Number of replacements $= 25.$

Labor turnover $= \frac{25}{950}$ or 2.6 per cent.

Percentage of absenteeism $= \frac{950 - 800}{950}$ or 15.8 per cent.

It will be noticed that the use of this method results in a much lower turnover rate which is especially true in the case of a decreasing labor force.

The labor turnover for a given period should be reduced to a yearly basis in the same fashion that the Public Health Service reduces mortality and morbidity statistics to a yearly rate. If the given period is a month, the percentage should be multiplied by 12; if a week by 52. Care should be taken: (a) that the replacements listed should not include former employees newly hired for their old positions; (b) that the statistics be compiled for departments and trades as well as for the plant as a whole.

Emergency Fleet Corporation,
Philadelphia, Pa.
PAUL H. DOUGLAS.

The Central Bureau of Planning and Statistics has prepared a typewritten pamphlet to show the principal sources of *Labor Statistics* (Washington, Mar. 19, 1919, pp. 67), which have been compiled by federal and state agencies. Sources are grouped under the following headings: accident compensation and insurance; accidents; cost of living; disputes and settlements; employment; employment agencies; factory inspection; hours of labor; housing; labor costs; labor demand and supply; labor organizations; labor turnover; occupational diseases; productivity of labor; unemployment; vocational education; wages; and welfare work.

The federal Bureau of Labor Statistics has issued the following bulletins:

No. 233, *The Operation of the Industrial Disputes Investigation Act of Canada,* by B. P. Squires (pp. 150) which contains a two-page bibliography.

No. 253, *Women in the Lead Industries,* by Alice Hamilton (Feb., 1919, pp. 38).

The Training and Dilution Service of the United States Department of Labor has for distribution a pamphlet on *British Methods of Training Workers in War Industries* (Washington, 1918, pp. 68); also pamphlets on *How Training Departments have Bettered Production* (1919, pp. 23); *How to Start a Training Department in a Factory* (pp. 24); and *A Successful Apprentice Toolmakers' School* (1919, pp. 8).

The Children's Bureau of the federal Department of Labor has issued a bulletin on *The States and Child Labor* giving lists of states with certain restrictions as to ages and hours (Washington, 1919, pp. 46); also *The Employment Certificate System a Safeguard for the Working Child* (pp. 12); and a monograph on *Infant Mortality*, results of a field study in Brockton, Mass., based on births in one year, by Mary V. Dempsey (Washington, 1918, pp. 82).

The Department of Labor has published a report of a survey by the Women in Industry Service on *Labor Laws for Women in Industry in Indiana* (Washington, Dec. 31, 1918, pp. 29).

State labor reports have been received as follows:

Fifth Annual Report of the State Board of Labor and Industries of Massachusetts (Boston, 1918, pp. 81).

Twelfth Annual Report of the Public Employment Offices of Massachusetts (Boston, Bureau of Statistics, 1919, pp. 34).

Thirty-second Annual Report of the State Board of Arbitration of Massachusetts, 1917 (Boston, 1918, pp. 213).

Labor Legislation in Massachusetts, 1918, with Index to Bills Affecting Labor (Boston, Bureau of Statistics, Oct. 1, 1918, pp. 95).

Twenty-first Annual Report of the Bureau of Labor and Industrial Statistics of Virginia, 1918 (pp. 80).

Labor Laws of the State of Tennessee (Nashville, Tennessee Department of Workshop and Factory Inspection, 1918, pp. 53).

Kansas Labor Laws and Laws Especially Affecting the Employment of Labor, annotated and compiled for the State Department of Labor and Industries by Richard MacIntosh (Topeka, 1918, pp. 258).

Biennial Report of the State Industrial Commission of Oklahoma, September, 1916, to August, 1918 (Oklahoma City, pp. 18).

Eighteenth Biennial Report of the Bureau of Labor Statistics of California (Sacramento, pp. 470).

General Report of the Minister of Public Works and Labour of the Province of Quebec (Quebec, 1918, pp. 185).

The Department of Labor of New York has issued bulletins: Janu-

ary, 1919, *A Plan for Shop Safety Sanitation and Health Organization;* February, *Weekly Earnings of Women in Five Industries;* March, *The Industrial Replacement of Men by Women in the State of New York.*

The Minimum Wage Commission of Massachusetts has made a supplementary report of *Wages of Women in Candy Factories in Massachusetts* (Boston, 1919, pp. 42).

Money, Prices, Credit, and Banking

THE EQUATION OF EXCHANGE FOR 1918, as calculated by the usual method, with slight modifications, is:[1]

$$\overbrace{\text{Money} \times \text{its velocity}}^{\text{Circ. of money (74)}} + \overbrace{\text{Deposits} \times \text{their veloc.}}^{\text{Circ. of checks (1195)}} = \overbrace{\text{Trade} \times \text{scale of prices}}^{\text{Value of goods bought (1269)}}$$

$$\begin{array}{ccccc} M \times V & + & M' \times V' & = & T \times P \\ 2.46 \times 30 & + & 12.5 \times 95.6 & = & 641 \times 198 \text{ per cent} \end{array}$$

The meaning is that the money in actual circulation (*i.e., outside of banks and the United States Treasury*) was 2.46 billions of dollars and changed hands about 30 times in the year, thus effecting 2.46 × 30 or 74 billions of exchanges; the volume of deposits subject to check was 12.5 billions and changed hands about 95.6 times in the year, thus effecting 12.5 × 95.6 or 1195 billions of exchanges, the two together making a total of 74 + 1195 or 1269 billions. This paid for a volume of trade of 641 billion units (a "unit" of trade being that amount of goods which, in the base year, 1909, was worth $1), at prices 98 per cent higher than the prices of said base year, so that 641 × 198 per cent is also 1269.

Some errors in the figures of the diagrams published December 1917 are here corrected.

I would emphasize, even more than I have done previously, that little or no dependence is to be placed on the *absolute* values of V' and T in the equation of exchange. Only the *relative* changes of V' and T may be regarded as having any real value, and that only approximate. Probably they do not have much value, even approximate, for comparing widely distant dates, such as 1918 with 1909. This is because, since 1909, I have been forced to employ *extra*polation, which is almost sure to involve a cumulative error.

We may say almost the opposite of V. Its relative fluctuations are purely conjectural, based chiefly on the behavior of V'; but its abso-

[1] In spite of their very rough character, I have kept up these annual calculations from year to year in the hope that better data would eventually be forthcoming. There are some indications that this hope will be realized next year.

lute value (as calculated for 1896 and 1909) does, I believe, approximate the truth, roughly at least.

Comparing with 1917, we find that the money-in-circulation and deposits-subject-to-check increased about 20 or 25 per cent; the volume of trade increased 7 or 8 per cent; and the price level increased about 15 per cent. The velocities did not change greatly. The behavior of all six magnitudes is shown in the main (upper) diagram.

Thus 1918 was a year of general expansion. The great growth of war trade more than compensated for the great shrinkage of ordinary business; and there was monetary and credit inflation.

The lower diagram is for bimonthly periods and continues that first presented four years ago. It portrays the situation at the six dates[2] of each year for which the Comptroller's figures for national banks are available. The first three dates were before the outbreak of war in Europe.

As noted four years ago, the various magnitudes of the equation of exchange varied little in the first three periods of 1914, preceding the war, but after its outbreak, they fluctuated violently.

There were sudden contractions followed by gradual expansions. The volume of trade showed a sudden reduction following the outbreak of the war and a subsequent full recovery distributed through the remainder of 1914. The velocities[3] of circulation showed the same sudden contraction, with subsequent rapid recovery.

In short, the exchangers of money and goods, following the alarm of war, temporarily "stopped, looked, and listened." Money was held and even hoarded. As a consequence, there was an emergency expansion of the volume of money during the last half of 1914, with a restoration to normal in 1915, and a tendency to expand towards the end of 1916.

The deposits, on the other hand, executed an opposite movement, contracting soon after the war began, and expanding during 1916.

The entrance of the United States into the war, in April, 1917, seemed to cause far less disturbance than the original outbreak in 1914, presumably because it was less of a surprise. Moreover, instead of a slowing down of circulation there was a speeding up and a rise of prices.

[2] The exact dates for the Comptroller's data are given in the table below (for money in banks).

As indicated in the heading of the lower diagram, all the rates are rates per year, not per month. The method of calculation is the same as that used four years ago and described in this Review for June, 1915 (p. 407).

[3] As to money, this is only inferential, on the assumption that its velocity (V) followed that of deposits (V').

The black areas indicate weights, or counter-poises, the equilibrium of which corresponds to the "equation of exchange."
These black areas from left to right represent:

M′, *i.e.*, bank deposits subject to check, in billions of dollars.

M, *i.e.*, money in circulation in the United States (outside of the United States Treasury *and the banks*), in billions of dollars.

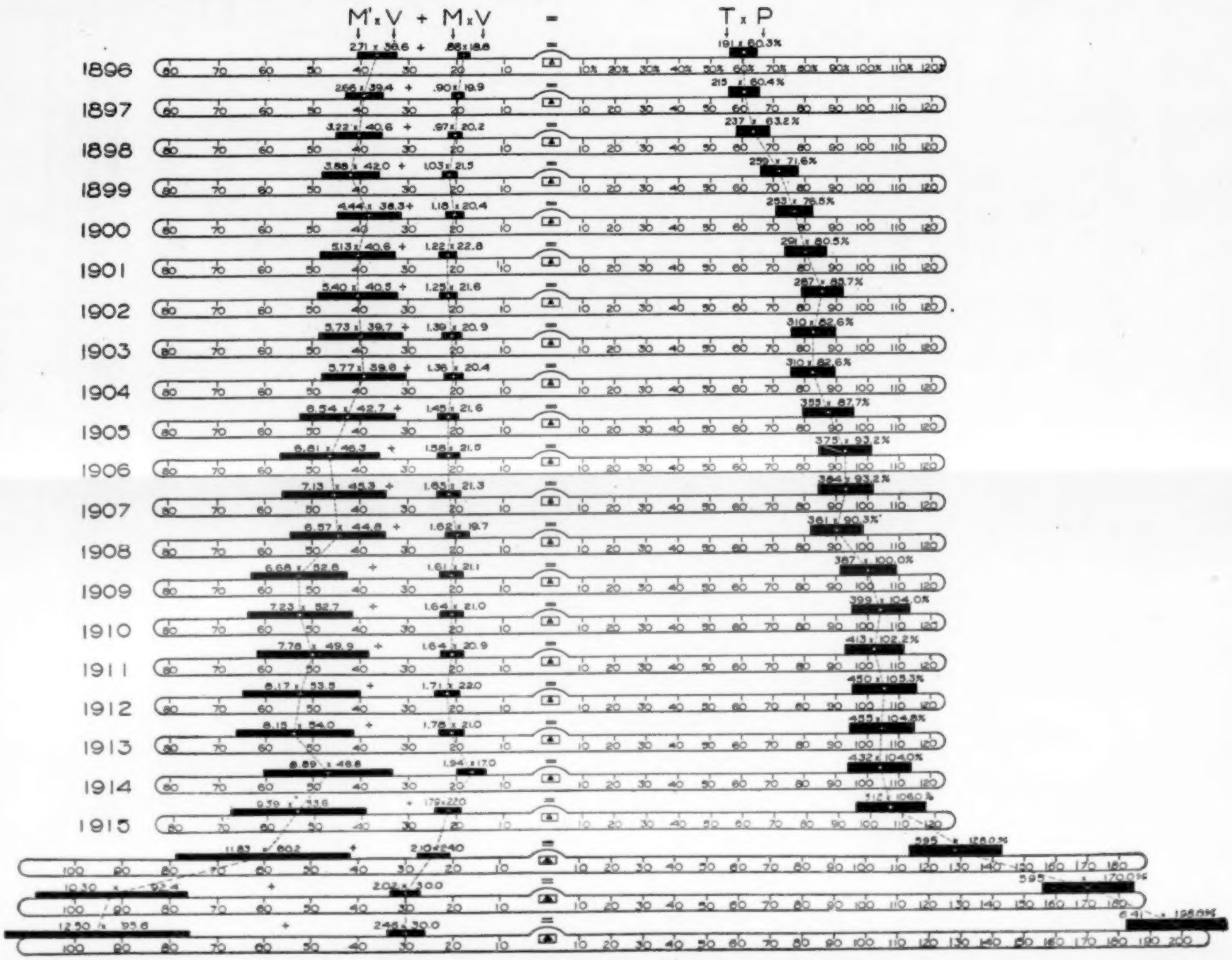
T, *i.e.*, the volume of trade circulated in billions of "units" (each "unit" being that quantity which could be purchased for one dollar in 1909).

The *lever arms* of the above three weights represent:

V′, *i.e.*, the velocity of circulation ("activity") of the deposits, M′.

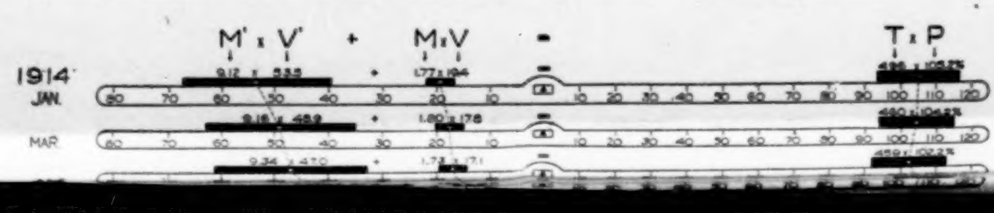
V, *i.e.*, the velocity of circulation of the money, M.

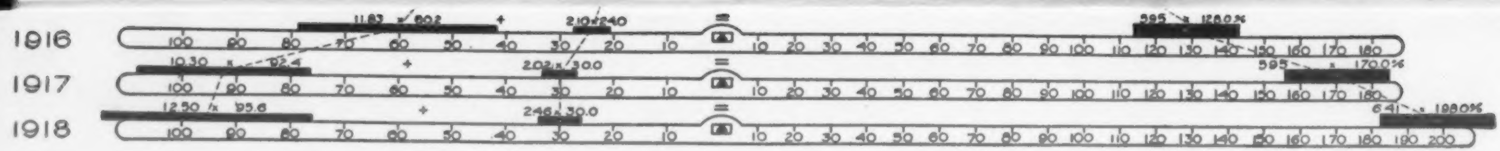
P, *i.e.*, the index number, or scale of prices, at which the trade, T, is conducted. (This scale of prices is measured as a percentage of the scale of prices of 1909.)



Equation of exchange for six periods in 1914, 1915, 1916, 1917, and 1918.

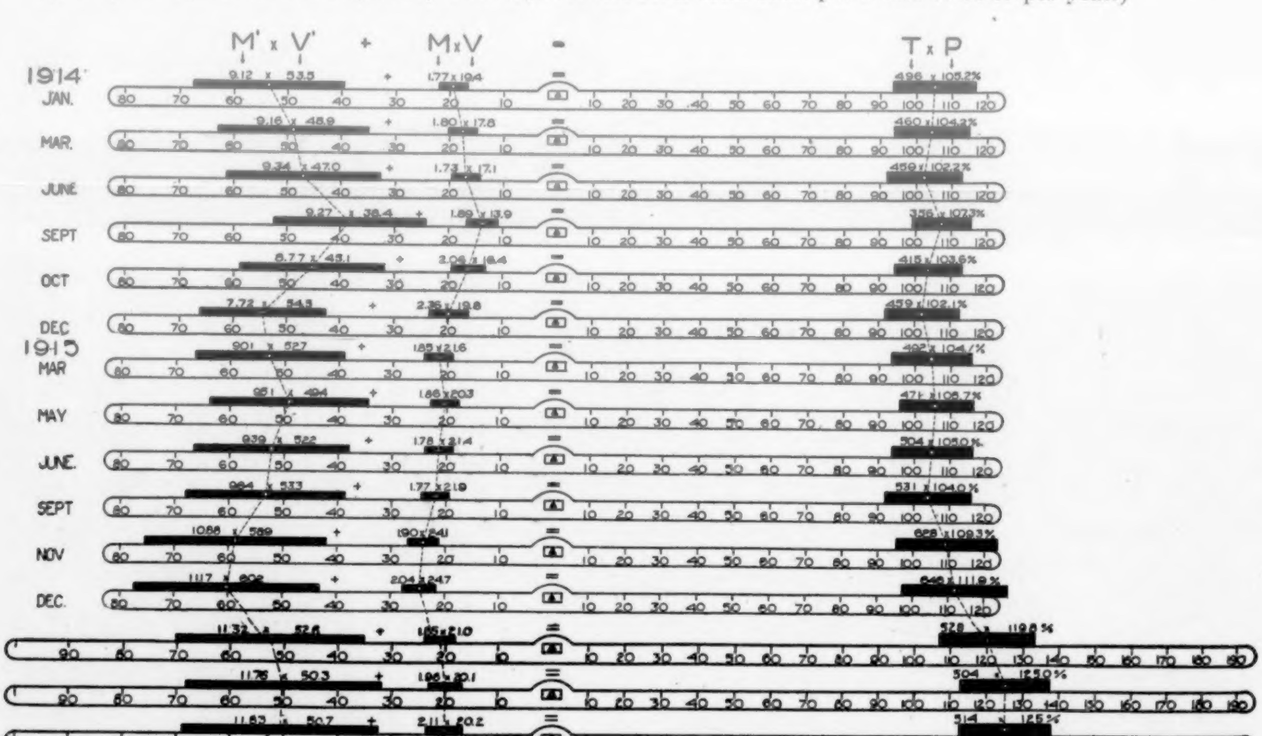
(V′, V, and T have been multiplied by twelve, to convert them from rates per month to rates per year.)

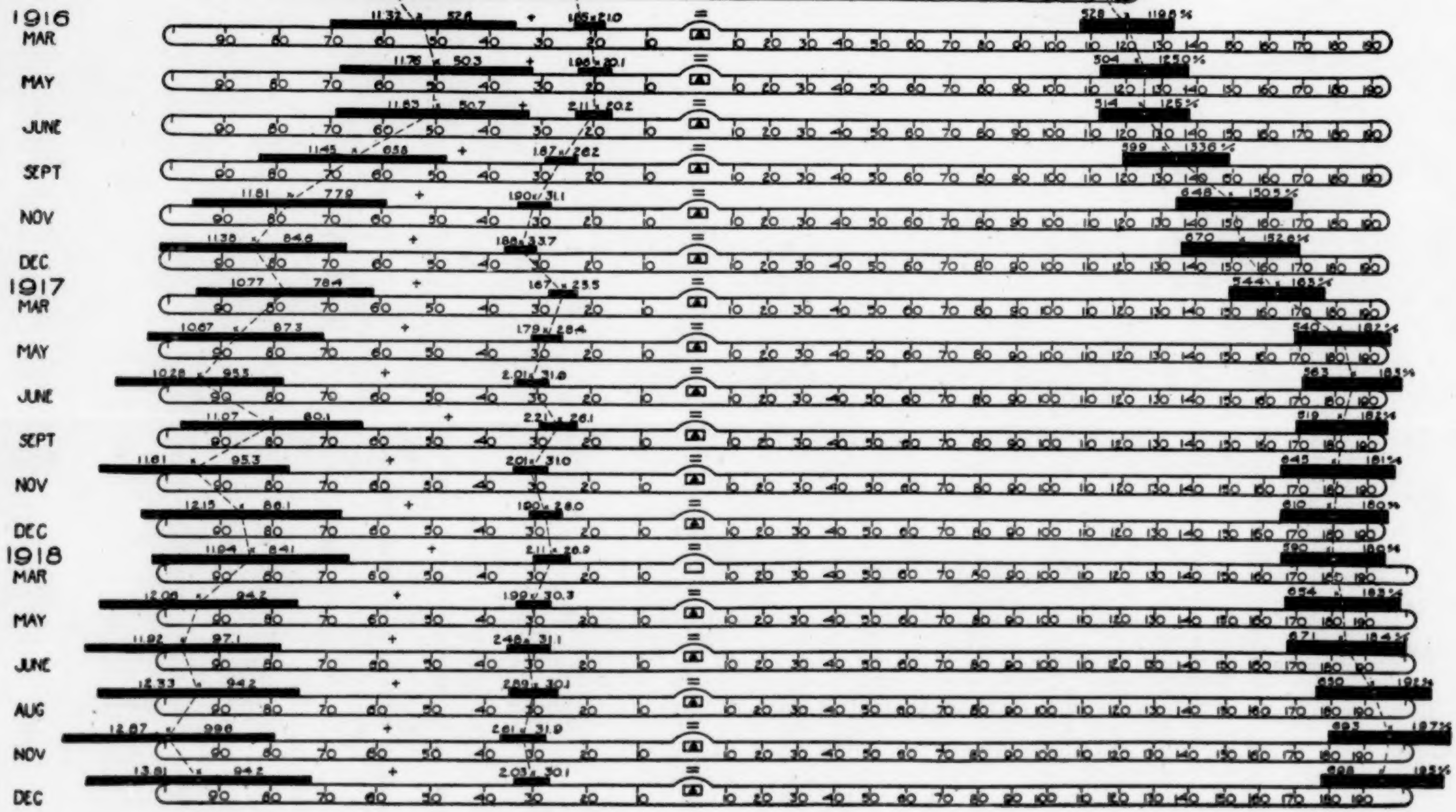




Equation of exchange for six periods in 1914, 1915, 1916, 1917, and 1918.

(V′, V, and T have been multiplied by twelve, to convert them from rates per month to rates per year.)




1916
MAR
MAY
JUNE
SEPT
NOV
DEC
1917
MAR
MAY
JUNE
SEPT
NOV
DEC
1918
MAR
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Following the armistice in November, 1918, there was another speeding up of circulation. There was also an expansion of deposits and trade.

These various changes in the equation of exchange are closely associated with a third magnitude, namely, the ***money in banks,*** that is, the (cash) bank reserves which are not represented specifically in the diagram but which are given (in billions) in the following table:

MONEY IN BANKS

Date	National	All	Date	National	All
1914			1916		
Jan. 13	1.03		Mar. 7	.90	
Mar. 4	1.02		May 1	.85	
June 30	1.02	1.67	June 30	.82	1.91
Sept. 12	.98		Sept. 12	.85	
Oct. 31	1.01		Nov. 17	.86	
Dec. 31	.73		Dec. 27	.88	
1915			1917		
Mar. 4	.78		Mar. 5	.89	
May 1	.79		May 1	.84	
June 23	.86	1.77	June 20	.75	2.75
Sept. 2	.91		Sept. 11	.49	
Nov. 10	.92		Nov. 20	.52	
Dec. 31	.88		Dec. 31	.53	
			1918		
			Mar. 4	.45	
			May 10	.46	
			June 29	.38	2.90
			Aug. 31	.36	
			Nov. 1	.44	
			Dec. 31	.52	

It is interesting to note the behavior of bank reserves, following the three critical points of time above discussed.

These figures, with those in the diagram, indicate that the shock of war produced, in the autumn of 1914, a displacement of cash from banks into private pockets and tills, followed by a slow reaction.

After the entrance of the United States into the war there was the same tendency for money to flow out of the banks.[4]

After the armistice there was a back flow.

IRVING FISHER.

Yale University.

[4] The large drop between June 20 and September 11, 1917, was, however, due to the change in reserve requirements, made by the amendment to the Federal Reserve act, June 21, 1917, prescribing that national banks should keep all their legal reserve with the Federal Reserve Banks.

The Information and Education Service of the United States Department of Labor has made a reprint of the address of Professor Irving Fisher before the conference of governors and mayors at the White House, March 3, 1919, on *The New Price Revolution*.

The Price Section of the Division of Planning and Statistics of the War Industries Board has issued a pamphlet on *Comparison of Prices during the Civil War and the Present War* (Washington, 1918, pp. 54).

Public Finance

The Income Tax Primer has been revised as of date March 1, 1919, by the Bureau of Internal Revenue, for the information of taxpayers (Washington, preliminary edition, pp. 38). The bureau has also issued a preliminary edition of *Income Tax Primer for Farmers* (pp. 27).

In the *Eighth Annual Report of the New Hampshire State Tax Commission* (Concord, 1918, pp. 199) the subject of the relation of savings banks to taxation is briefly discussed.

The *Report of the Tax Commissioner of Connecticut for the Biennial Period, 1917-1918* (Hartford, pp. 269), gives some attention to the subject of taxation of inheritances. It also contains excerpts from a number of addresses on the various aspects of tax problems.

The *Seventh Annual Report of the Board of Tax Commissioners of Rhode Island* (Providence, 1919, pp. 53) refers to the inheritance tax act of 1916 and also contains a discussion on the desirability of a uniform date for assessment.

Tax Laws of the State of New Jersey have been recently compiled under the direction of the State Board of Taxes and Assessment of New Jersey (Trenton, 1918, pp. 193). The compilers, Theodore Backes and G. W. Schrothe, Jr., have added abundant notes and annotations.

The *First Biennial Report of the State Tax Commission of Missouri, 1917-1918* (Jefferson City, pp. 259) contains a considerable amount of descriptive material in regard to the tax laws of Missouri. There are reprints of the papers presented at different tax conferences. Pages 160-170 present a general discussion of the inheritance tax and pages 171-190 deal with the income tax. A summary is also given on tax laws in other states with many excerpts from the volume by Dr. Lutz on *The State Tax Commission*.

The Third Biennial Report of the Tax Commission of South Dakota, 1917-1918 (Pierre, pp. 112), also has reference to the working of the new tax commission law of that state as of 1913.

Other tax reports are:

Report of the Tax Commissioner of Massachusetts, 1918 (Boston, 1919, pp. 176).

Annual Report of the State Tax Commission of New York for 1918 (Albany, pp. 95).

Report of the State Tax Commission of North Carolina, 1918 (Raleigh, pp. 425).

The *Report of the State Board of Equalization of Alabama, from September, 1915 to October, 1918* (Montgomery, pp. 182).

The *Report of the Board of State Tax Commissioners and State Board of Assessors of Michigan for 1917-1918* (Lansing, pp. 81).

Sixth Report to the Legislature by the Tax Commission of Kansas, 1918 (Topeka, pp. 66).

Sixth Biennial Report of The Tax Commission of Kansas, 1916-1918 (Topeka, 1918, pp. 66).

Report of Proceedings of the Arizona Tax Conference, July, 1918 (Phoenix, pp. 176).

Fourth Biennial Report of North Dakota Tax Commission (Bismarck, 1919, pp. 77).

Report of the Tax and License Commission to the State Board of Equalization, Montana, 1917-1918 (Helena, pp. 204).

Fifth Biennial Report of the Commissioner of Taxation of Wyoming for 1917-1918 (Cheyenne, pp. 76).

First Biennial Report of the State Tax Commissioner of Washington, 1918 (Olympia, pp. 114).

The National Industrial Conference Board has prepared a *Brief Analysis of War Revenue Bill H. R. 12863 as Affecting Industry* (Boston, Jan. 27, 1919, pp. 15).

The Report of the Committee on Taxation, presented at the forty-second annual meeting of the New York State Bar Association, held in New York, January 17, 1919, has been issued as a reprint (pp. 111).

The *Twenty-eighth Annual Report of the New York Tax Reform Association* (29 Broadway) gives a summary of the changes in tax laws during 1918, and the recent proposals.

Insurance and Pensions

Bulletin No. 243 of the United States Department of Labor Bureau of Labor Statistics presents *Workmen's Compensation Legislation of the United States and Foreign Countries, 1917 and 1918* (Washington, Sept., 1918, pp. 477).

PERIODICALS

The REVIEW is indebted to Robert F. Foerster for abstracts of articles in Italian periodicals, and to R. S. Saby for abstracts of articles in Danish and Swedish periodicals.

Theory

(Abstracts by Arthur N. Young)

CAMP, W. R. *Limitations of the Ricardian theory of rent.* II. Pol. Sci. Quart., Dec., 1918. Pp. 29. Technological changes, notably the development of railways, have so altered the economic situation that Ricardo's doctrine that progress would tend to better the relative position of agriculturists compared with capitalists is shown to be incorrect.

CARVER, T. N. *The behavioristic man.* Quart. Journ. Econ., Nov., 1918. Pp. 5. The analyses of the "behavioristic school of economists" supplement rather than supplant the explanations of economic motives given by the classical school.

GURRIERI, A. *I coefficienti storico-economici dell' utopia sociale di Platone.* Riv. Ital. di Soc., Jan.-June, 1918. Pp. 33.

LOOS, I. *Propaedeutic to modern economics.* Am. Journ. Sociology, July, Sept., 1918. Pp. 36, 14. A series of three essays: Survey of economic nationalism; The larger social science and open questions of economic methodology; The divisions of current economics.

LORIA, A. *Nuovi stelloncini critici.* Rif. Soc., Jan.-Feb., 1919. Pp. 19. Reflections upon a variety of problems in theory.

Economic History, United States

(Abstracts by E. L. Bogart)

BRADLEE, F. B. C. *The Salem iron factory.* Hist. Coll. Essex Inst., Apr., 1918. Pp. 17. An account of the first iron works in the United States.

CATES, D. *Preliminary survey of industrial reconstruction.* Journ. Pol. Econ., Jan., 1919. Pp. 8. Unemployment can best be avoided by building public works and the use of government employment agencies.

COTTERILL, B. S. *National railroad convention in St. Louis, 1849.* Missouri Hist. Rev., July, 1918. Pp. 16.

EMERSON, F. V. *The Southern long-leaf pine belt.* Geog. Rev., Feb., 1919. The yellow pine is being rapidly cut and the problem is presented of the proper utilization of the cut-over lands. The three most feasible projects are reforestation, agriculture, and stock raising.

FISH, C. R. *Back to peace in 1865.* Am. Hist. Rev., Apr., 1919. Pp. 8. A brief outline of demobilization after the Civil War, the absorption of ex-soldiers into industry, and the pension development.

FOX, D. R. *The economic status of New York Whigs.* Pol. Sci. Quart., Dec., 1918. Pp. 18. The well-to-do and conservative elements in New York state about 1840 belonged primarily to the Whig Party.

Goodwin, Cardinal. *American occupation of Iowa.* Iowa Journ. Hist. & Pol., Jan., 1919. Pp. 20. A historical review of the state, its boundary-fixing, population growth, industries, etc.

Kellogg, L. P. *The fur trade in Wisconsin.* Wis. Archeologist, Sept., 1918. A history of development.

Lyford, J. O. *New Hampshire's financial history.* Granite Monthly, Mar., 1919. Pp. 5. A brief history of that state's finances from Civil War days.

Rogers, H. O. *The lottery in American history.* Americana, Jan., 1919. Pp. 14. A review of lotteries in foreign countries, their adoption here in 1784, and their course down to 1894.

Steiner, B. C. *South Atlantic states in 1833 as seen by a New Englander.* Maryland Hist. Mag., Dec., 1918. Continuing a diary of Henry Barnard.

Economic History, Foreign

Andréadès, A. *Les progrès économiques de la Grèce depuis quarante ans.* II. Jour. des Econ., Jan. 15, 1919. Pp. 11.

Bourne, H. E. *Food control and price-fixing in revolutionary France.* Journ. Pol. Econ., Feb., Mar., 1919. Pp. 21.

Cabiati, A. *Il collocamento nell' immediato dopo-guerra.* Rif. Soc., Nov., Dec., 1918. Pp. 15. Industrial and social needs of Italy in the first after-war months.

Frank, T. *The economic life of an ancient city.* Classical Philology, June, 1919.

Frank, T. *Agriculture in early Latium.* Am. Econ. Rev., June, 1919. Pp. 10.

Giampietro, P. *La legislazione di guerra sulle miniere e l'unificazione delle leggi minerarie.* Riv. d. Soc. Commerc., Nov., 1918. Pp. 6.

Guyot, Y. *Le règlement des comptes avec l'Allemagne.* Journ. des Econ., Jan. 15, 1919. Pp. 24.

Marion, M. *La question du papier monnaie en 1790. Les premières fautes.* Rev. Hist., 1918.

Michels, R. *Cenni su alcuni aspetti delle condizioni operaie in Germania durante la guerra mondiale.* Rif. Soc., Jan.-Feb., 1919. Pp. 15.

Pico, A. B. *Giuseppe Toniolo.* Riv. Internaz., Nov., 1918. Pp. 23. A memorial essay on the life of the late editor of *Rivista Internazionale,* with a bibliography of his writings.

Pigou, A. C. *Government control in war and peace.* Econ. Journ., Dec., 1918. Pp. 10. Deals with governmental control of production, rationing, and price-fixing of commodities.

Prato, G. *Le fonti storiche della legislazione economica di guerra. Il controllo dei cambi in Piemonto nel 1798.* Rif. Soc., Sept.-Oct., 1918. Pp. 33.

Raffalovich, A. *Le marché financier en 1918.* Journ. des Econ., Jan. 15, 1919. Pp. 24.

RAFFALOVICH, A. *Quelques aspects économiques de l'Allemagne: le châtiment.* L'Europe Nouvelle, Jan. 4, 1919. Pp. 2.

SCHELLE, G. *L'influence de la guerre sur le pouvoir de consommation et sur la formation des capitaux.* Journ. des Econ., Jan. 15, 1919. Pp. 9.

SCHEUER, F. *L'industrie horlogère Suisse depuis la guerre.* Zeitschr. f. Schweiz. Stat. u. Volkswirts., Parts 2 & 3, 1918. Pp. 7.

SUBERCASEAUX, G. *Effets de la guerre sur la vie économique du Chili.* Journ. des Econ., Feb. 15, 1919. Pp. 7.

Agricultural Economics

(Abstracts by A. J. Dadisman)

ARNOLD, J. H. and MONTGOMERY, F. *Influence of a city on farming.* U. S. Dept. Agr. Bull. 678, 1918. Pp. 24. A popular bulletin showing factors influencing profits based on 100 survey records; containing tables, charts, and description of typical farms.

BATTISON, W. J. *The necessity of an increased wool supply.* Bull. Nat. Assoc. Wool Manfrs., Jan., 1919. Pp. 9. An address calling attention to the possibilities and necessity of growing enough wool to supply domestic needs.

BECKERICH, A. *Les warrants agricoles.* Journ. des Econ., October, 1917. Pp. 8. A discussion of the short-time agricultural loan as used in France and its effect on crop production.

DIXON, H. M. and DRAKE, J. A. *A study of farm management problems in Lenawee County, Michigan.* U. S. Dept. Agr. Pp. 36. A popular bulletin showing typical farm practices in the region studied. The basic data for the bulletin were obtained from 453 survey records for the farm year 1911.

GILLETTE, J. M. *Marketing farm products.* Quart. Journ. Univ. No. Dak., Jan., 1919. Pp. 14. The author points out the general phases of the subject, notes defects, and mentions remedial measures.

MAYLANDER, A. *Food situation in Germany during the summer of 1918.* Mo. Labor Rev. Nov., 1918. Pp. 24. Largely extracts from papers and speeches showing general scarcity of food and rising prices with resulting public discontent.

MUNGER, T. T. *First steps for bringing into use the idle lands of Oregon.* Commonwealth Rev., Univ. of Oregon. July, 1918. Pp. 11. An argument favoring the preparation of logged-off land in western Oregon by the government for colonization by returned soldiers.

PRATO, G. *La terra ai contadini o la terra agli impiegati?* Rif. Soc., Jan.-Feb., 1919. Pp. 56. For two years there has been an insistent demand in Italy that the land be given over to the people, and a large literature has resulted. The significance and merits of the movement are here studied.

THOMPSON, W. H. *The profits and rent of agricultural land in a corner of Bengal in 1789.* Bengal Econ. Journ., Sept., 1918. Pp. 21. An analysis of methods, cost of cultivating crops, cost of living, profits, etc., with some comparisons for 1913.

Wilcox, E. V. *Lease contracts used in renting farms on shares.* U. S. Dept. Agr. Bull. 650, 1918. Pp. 36. A study of the distribution of investments, expenses, and incomes between landlord and tenant farm lessee contracts throughout the United States.

Williard, R. E. *A farm management study of cotton farms of Ellis County, Texas.* U. S. Dept. Agr. Bull. 659, 1918. Pp. 54. A study of organization of cotton farms and cost producing crops. Data from 120 farms; tables, charts, and illustrations.

Wilson, R. R. *The common interests of the cotton grower and cotton manufacturer in the United States.* Econ. World, Mar. 15, 1919. Pp. 5. A discussion of the needs of the whole cotton industry—growing, storage, and manufacturing.

Agricultural coöperation in Denmark. Ill. Dept. Agr. Circ. 259. 1918. Pp. 7. A brief statement of conditions conducive to agricultural coöperation in Denmark and growth and success of some coöperative organizations.

Food and fuel control in France. Mo. Labor Rev., Nov., 1918. Pp. 8. A statement of control measures and fixed prices of cereals, vegetables, meats, etc.; coal and gasoline; and restaurant regulations.

L'agriculture française et les prisonniers in guerre. Rev. d'Econ. Pol., July-Aug., 1918. Pp. 17. Contrast between French methods and German methods of handling prisoners of war in agricultural work.

Agricultural wages and the increase in the cost of living. Intern. Rev. Agr. Econ., Oct., 1918. Pp. 10. An examination of the movement of agricultural wages and cost of living in Argentine Republic, 1913 to 1915.

Railways and Transportation

(Abstracts by Julius H. Parmelee)

Arkwright, B. H. *The average man and the railroads.* Metropolitan, Apr., 1919. Pp. 3.

d'Avenel, G. *Le transport des marchandises depuis sept siècles.* Rev. des Deux Mondes, Sept. 1, 1918. Pp. 28. Historical development of freight traffic by rail and water.

Bradford, E. A. *Commodity regulation in light of rail and utilities cases.* Annalist, Jan. 20, 1919. P. 1. Government control exerts downward pressure on capital values.

Carter, W. S. *Effect of Federal control on railway labor.* Proc. Acad. Pol. Sci., Feb., 1919. Pp. 13. Work of the division of labor, U. S. R. R. Administration.

Cole, A. B. *What freight handling on electric roads requires and costs.* Elec. Ry. Journ., Feb. 1, 1919. Pp. 10. With illustrations and statistical tables.

Cooper, C. S. *The railways of the republic of Chile.* Ry. Rev., Mar. 1, 8, 1919. Pp. 5, 5. With map and illustrations.

Cunningham, W. J. *The arithmetic of railroading.* N. Y. Railroad Club. Proc., Feb. 21, 1919. Pp. 16. Work of Operating Statistics Section, U. S. R. R. Administration.

Dewing, A. S. *The purposes achieved by railroad reorganization.* Am. Econ. Rev., June, 1919. Pp. 30.

Dunn, S. O. *What has happened to the railways.* Collier's, Feb. 15, 1919. Pp. 4.

Ernst, F. B. *Railroad purchases as a stabilizer of business.* Ry. Age, Apr. 11, 1919. Pp. 3. With diagrams.

Finn, L. B. *Why private ownership cannot meet demands.* Traffic Wld., Apr. 5, 1919. Pp. 8.

Fitzgibbon, J. M. *Should railroads handle the express business?* Ry. Rev., Feb. 22, 1919. Pp. 3. Answers in the affirmative.

Ford, E. *Can British railways be made self-supporting?* Ry. Gaz. (London), Feb. 21, 1919. Pp. 2.

Goldmark, P. *Women in the railroad service.* Proc. Acad. Pol. Sci., Feb., 1919. Pp. 6.

Holmes, W. H. *Improved railway conditions in Nicaragua.* Ry. Rev., Feb. 8, 1919. Pp. 5. With map and illustrations.

Houard, G. *Le rail Africain.* Je Sais Tout, Feb. 15, 1919. Pp. 11.

Kahn, O. H. *Concerning today's railroad problem.* Ry. Rev., Mar. 1, 1919. Pp. 2.

Lacroix. *Les chemins de fer pendant la guerre. I. L'effort militaire.* Rev. des Deux Mondes, Mar. 15, 1919. Pp. 15.

Lane, F. K. *The progress of the Alaskan railroad.* Ry. Age, Mar. 7, 1919. Pp. 5. Memorandum submitted to Congress by Secretary Lane. Road about two thirds completed, at cost approximating $73,000 per mile of main line.

Lavis, F. *An important development in the railways of Spain.* Ry. Age, Mar. 28, Apr. 4, 11, 1919. Pp. 6, 3, 5. With map and illustrations. Proposed trunk line from France to Gibraltar.

Leigh, E. B. *Railway buying and industrial readjustment.* Ry. Age, Apr. 4, 1919. Pp. 3.

Lisman, F. J. *A possible solution of the railroad problem.* Ry. Age, Mar. 28, Apr. 4, 1919. Pp. 4, 7. Advocates system consolidation, strict regulation, and a fair return to investors. Eight maps show possible combinations of systems.

Mackay, C. H. *Government ownership of the telegraph lines and the national economy.* Econ. Wld., Jan. 18, 1919. Pp. 3. Opposes nationalization on grounds of economy and efficiency.

Morawetz, V. *The railway problem.* N. Am. Rev., Mar., Apr., 1919. Pp. 15, 14. Proposed solution of the problem.

Randolph, O. C. F. *Building American railroads in France.* Ry. Maint. Engr., Apr., 1919. Pp. 3.

Reid, W. A. *Bolivia's railways—progress and prospects.* Ry. Rev., Mar. 15, 1919. Pp. 6. With map and illustrations.

Ruggles, C. O. *Railway service and regulation.* Quart. Journ. Econ., Nov., 1918. Pp. 45. Reviews the inadequacy of railroad facilities of past eight years in relation to growth of transportation demands, and takes up present railroad situation.

Sines, G. H. *Adjustments of wages and conditions of employment under governmental control of industry.* Proc. Acad. Pol. Sci., Feb., 1919. Pp. 6. Ironing out inequalities in railway wages.

Sisson, F. H. *The electric railway situation from the standpoint of investors.* Econ. Wld., Mar. 29, 1919. Pp. 4.

Warburg, P. M. *A suggestion of the main principles on which the solution of the railroad problem should be sought.* Supp. Mo. Bull. Chamber Comm. N. Y., Feb., 1919. Pp. 36. Advocates private ownership, guarantee of 4½ per cent on valuation of property, profits above 6 per cent on capital to be shared with government.

Wilcox, D. F. *Problem of reconstruction with respect to urban transportation.* Nat. Munic. Rev., Jan., 1919. Pp. 16. Advocates public operation, with or without ownership, as solution of serious present problem.

Wilson, H. L. *Dinner is now served.* Sat. Eve. Post, Apr. 12, 1919. Pp. 4. Jocular criticism of Railroad Administration table d'hote dining-car meals.

"Berlin-Baghdad." Ry. Gaz. (London), Mar. 7, 1919. Pp. 3. With maps.

Developments in American Railroad Association. Ry. Age, Mar. 7, 1919. Pp. 2. Reorganization of American Railway Association to include a number of existing mechanical and other railway associations.

European train speeds. Ry. Gaz. (London), Jan. 17, 24, Feb. 14, Mar. 7, 14, Apr. 4, 1919. Pp. 6, 8, 5, 6, 5, 3, 3. Series unfinished.

Experience of French argument against guaranteed incomes. Ry. Age, Apr. 4, 1919. Pp. 2.

Federal railway failure one of service as well as dollars. Annalist, Apr. 14, 1919. Pp. 2. Analysis of charts prepared by F. L. Hutchins.

Government ownership from a British point of view. Ry. Age, Jan. 24, 1919. Pp. 2. Reprint of article from *Engineering* (London).

Labor saving devices in railroad offices. Ry. Rev., Feb. 8, 15, 1919. Pp. 4, 4.

Ministry of ways and communications. Ry. Gaz., Mar. 7, 1919. Pp. 4. Proposed British transport bill.

Modern armies and modern transport. Ry. Gaz., (London), Jan. 24, 31, Feb. 21, 28, Mar. 14, Apr. 14, 1919. Pp. 2, 1, 4, 2, 2, 1. Series outlining the work of the several British railways in the war.

Peru's railways need many connecting links. Ry. Age, Mar. 7, 1919. Pp. 5. With map and illustrations.

The railways of the republic of Brazil. Econ. Wld., Mar. 22, 1919. Pp. 5. Digest of report of Bureau of Foreign and Domestic Commerce.

The select committee on transport. Ry. Gaz. (London), Jan. 31, Feb. 7, 14, 21, 28, Mar. 7, 1919. Pp. 3, 3, 3, 3, 2, 3. Digest of hearings.

State ownership and operation of railways. Ry. Gaz. (London), Jan. 17, 1919. Pp. 3. Concluding section of digest of evidence before South African inquiry into state ownership.

What the railwaymen want. Nation (London), Feb. 8, 1919. Pp. 2.

Commerce

(Abstracts by H. R. Tosdal)

Barber, C. A. *Indian sugar-cane industry.* Wealth of India, Oct., 1918. Pp. 3. The difficulties are chiefly the class of cane grown, competition with *gur* and with other crops and the parcellization of the land.

Battison, W. J. *Annual wool review for 1918.* Bull. Nat. Assoc. Wool Mfrs., Jan., 1919. Pp. 67. Excellent, comprehensive statistical review of wool for 1918.

Cadoux, G. *De la meilleure utilisation des combustibles en France et en Angleterre. Son importance économique et sociale.* Journ. de la Soc. Stat. de Paris, July, 1918. Pp. 14. In urging more efficient utilization of fuel, cites with approval a report of a British subcommittee recommending use of coal through conversion into electric power by a system of large central plants under government control.

Cance, A. E. and Ferguson, R. H. *The cost of distributing milk in six cities and towns of Massachusetts.* Thirtienth Annual Rept. Mass. Agr. Ex. Sta., Jan., 1918. Pp. 54. Presents results of investigation of costs of milk distribution made by agricultural experts. Average arrived at is 2.64 cents per quart.

Cherington, P. T. *After-war problems. Forecast of conditions that will confront the wool manufacturer.* Bull. Nat. Assoc. Wool. Mfrs., Jan., 1919. Pp. 10. Brief survey of wool market conditions during war with suggested program for return to peace basis.

Clark, J. A. H. *The Chilean nitrate industry.* Econ. Wld., Jan. 25, 1919. Pp. 4. Interesting description of technical and business methods in Chilean nitrate industry.

Daniels, G. W. *The cotton trade at the close of the Napoleonic War.* Trans. Manchester Stat. Soc., 1917-1918. Pp. 30. Interesting historical description of cotton trade based upon examination of statistical and other sources.

Di Nola, C. *Gli odierni aspetti dell' economia dei transporti.* Giorn. d. Econ., Dec., 1918. Pp. 16. The first instalment of a systematic review of shipbuilding and shipping today.

Litman, S. *Effects of the war on foreign trade.* Hist. Outlook, Feb., 1919. Pp. 2. Brief but thoughtful article asserting that the foreign trade of the United States and Germany will be most profoundly affected as a result of the war.

Marsh, A. R. *The cotton trade in the United States in 1918.* Econ. Wld., Feb. 8, 1919. Pp. 3. Brief survey of experience of American cotton trade in 1918.

Martin, P. F. *Effects of the war on British trade.* World's Markets, Feb., 1919. Pp. 3. Imports in 1918 showed huge gain over 1914, while exports declined; shipping eager to be relieved of government control.

Probus et de Lavergne. *L'exportation et les conditions de son développement.* L'Europe Nouvelle, Dec. 28, 1918, Jan. 4, 1919. Pp. 3, 3. Urges formation of export combinations to finance French exporters.

Sato, S. *The rice industry of Japan.* Econ. Journ., Dec., 1918. Pp. 13. Statistical study emphasizing paramount importance of the rice industry to Japan, the small size of fields, and small incomes of farmers. Advocates introduction of livestock to improve conditions.

Snow, C. D. *Our statistics of foreign commerce and the war.* Quart. Pub. Am. Stat. Assoc., Dec., 1918. Pp. 14. Describes nature and utilization of foreign commerce statistics during war.

Taussig, F. W. *Price-fixing as seen by a price-fixer.* Quart. Journ. Econ., Feb., 1919. Pp. 36. Excellent economic analysis of government price fixing in various lines. It is asserted that government price fixing was not uniform in its base, little guided by principles of deliberate policies, but so far as it went the outcome seemed to be good.

Wyler, J. *Fremdenverkehr und bevölkerungsbewegung.* Zeitschr. f. Schweiz. Stat. & Volkswirtsch., Heft 4, 1918. Pp. 18. A study of the Berne and Interlaken district in Switzerland showing statistically the development of tourist traffic and the movement of population.

Zingali, G. *Soste portuarie e giacenze di merci.* Riv. d. Soc. Comerc., Nov., 1918. Pp. 25. An analysis, largely statistical, of the operations of the port of Genoa.

Business conditions in Porto Rico Sound. World's Markets, Jan., 1919. Pp. 6. Survey of general commercial conditions. Financial situation greatly improved as result of the war.

An English survey of petroleum in the world's economy in 1918. Econ. Wld., Mar. 1, 1919. Pp. 3. Outlines the struggle of petroleum producers during the past year to supply the vital needs of the Allies in the War.

Scheme for unification of the port accepted. Greater New York, Jan. 27, 1919. Pp. 2. Plan proposed for the creation of a single authority representing the states of New York and New Jersey to manage the port of New York as a whole receives approval.

United States Tariff Commission for free ports. Greater New York, Jan. 6, 13, 1919. Pp. 3, 3. Asserts that the commission has officially recommended the adoption of the plan first proposed in this country by the Merchants' Association as an indispensable adjunct of our rapidly growing foreign trade. Claims that drawbacks are granted only under such exacting and intricate regulations that the amount of the drawback very often does not pay the cost of collecting it.

Accounting

(Abstracts by Martin J. Shugrue)

Belser, F. C. *Rapid calculation of compound interest processes.* Journ. Account., Apr., 1919. Pp. 8. Short-cut methods of calculating approximately compound interest, sinking fund instalments, annuities, present values, discounts, and other interest processes. Illustrated with problems and solutions.

Burton, A. S. *Why some cost systems fail to produce desired results.* Journ. Account., Apr., 1919. Pp. 10. Principal reasons are lack of understanding and red tape. Describes experiences with firms doing special or specification work, such as structural steel, concrete construction and fixtures where jobs are taken according to plans and specifications.

Field, W. P. *Accounting control for company store or commissary.* Journ. Account., Feb., 1919. Pp. 11. A practical method of accounting control for the retail store is here presented. The author states that the system as outlined has survived the test of many years.

Harrison, G. C. *Cost accounting to aid production.* V, VI, VII, Indus. Manag., Feb., Mar., Apr., 1919. Pp. 9, 6, 5. (5) The importance of coördination between the cost and planning systems. (6) Two large diagrams are presented showing how the cost, planning, and production systems may be coördinated. (7) Extension of application of scientific management principles illustrated by example of a firm entering field of manufacturing automobile trucks.

Kurtz, W. *Depreciation in telephone utilities.* Journ. Account., Feb., 1919. Pp. 14. In no class of public utilities is there a more fertile field for speculation as to what depreciation includes and the annual amount to be charged against operating expenses.

Lyon, O. *Municipal accounts.* Journ. Account., Feb., 1919. Pp. 9. Accurate statistical reports of a municipality should be prepared periodically in comparative form and accompanied by charts. Discusses specific accounts, schedules, and statements.

McKay, C. W. *Three industrial appraisals in one.* Indus. Manag., Feb., 1919. Pp. 3. An engineering appraisal today should be prepared from three points of view; for excess profit tax computation, for plant accounting, and for insurance adjustment.

Nelson, G. *Depreciation and depletion in relation to income tax returns.* Journ. Account., Feb., 1919. Pp. 8. Particular reference to depletion in cases of oil or gas properties, mines, and timber lands.

Stover, J. *Uniformity in school accounting.* Nat. Educ. Assoc. Journ., Nov., 1918. Pp. 5.

Thulin, F. *Mathematics of credit extension.* Journ. Account., Apr., 1919. Pp. 9. Factors to be taken into consideration in passing judgment on the soundness of the promise to pay. Form outlined by Federal Reserve Board in April, 1917, number of the *Federal Reserve Bulletin* cannot very well be improved upon.

Investments and Securities

(Abstracts by A. S. Dewing)

Benson, R. *Probable diversion of British investment capital from the United States to other fields.* Econ. Wld., Apr. 12, 1919. America being a creditor of the British Empire will not afford a profitable field for investment of British capital. Interesting comment that the English investment company, of which author is head, has consistently lost on British and colonial investments, and more than counterbalanced the losses from American investments.

Kent, F. I. *Matters to be studied by the investor in foreign countries.* Econ. Wld., Mar. 15, 1919. Closely summarized article giving factors to be considered under appropriate headings.

Rife, R. S. *Investment relations between Canada and the United States.* Guaranty News, Mar., 1919. Author's familiarity with statistics and use of them makes the article far superior to that ordinarily found in periodicals of this type.

Sisson, F. H. *The electric railway situation from the standpoint of investors.* Econ. Wld., Mar. 29, 1919. Address at meeting of American Electric Railway Association. Emphasizes the deplorable condition of electric railway credit and enumerates the causes. Unfortunately offers no solution.

Payen, E. *Les cours des principales valeurs fin 1913, 1914, 1917 et 1918.* L'Economiste, Jan. 11, 18, 1919. A summary of prices of bonds, French, Belgian, and neutral, in December of each of above years. Interesting to note the little decline, and how nearly 1918 prices approximate those of 1913.

Labor and Labor Organizations

(Abstracts by George E. Barnett)

Andrews, J. B. *International labor protection.* Am. Lab. Legis. Rev., Mar., 1919. Pp. 12. Favors American participation in labor treaties.

Beard, C. A. *Public employment.* Nat. Munic. Rev., Jan., 1919. Pp. 7. Recommends changes in methods of recruiting and in political status of government employees.

Carter, W. S. *Effect of federal control on railway labor.* Ry. Age, Dec. 13, 1918. Pp. 48. Outline of efforts to create improved relations between employer and employee.

Carver, T. N. *Four labor programs.* Quart. Journ. Econ., Feb., 1919. Pp. 23. Finds the explanation of the differences in labor programs in different degrees of lack of balance among the factors of production.

Cole, G. D. H. *The industrial councils of Great Britain.* Dial, Feb. 22, 1919. Pp. 3. The Whitley councils will have little influence on the impending conflict.

Douglas, P. H. and Wolfe, F. E. *Labor administration in the shipbuilding industry during war time.* I. Journ. Pol. Econ., Mar., 1919. Pp. 43. Careful and detailed description of the organization for dealing with labor problems.

Fish, E. H. *Principles of employing labor.* Indus. Manag., Feb., 1919. Pp. 5.

Gleason, A. *Towards democracy in reconstruction.* Intercol. Social., Feb., Mar., 1919. Pp. 5. Discusses tendencies in English labor opinion.

Good, E. T. *What's wrong with labour?* Finan. Rev. Rev., Mar., 1919. Pp. 20. Ignorance of economics is chiefly responsible for labor troubles.

Hookstadt, C. *Problem of the crippled man in industry.* Mo. Lab. Rev., Dec., 1918. Pp. 13.

Janes, G. M. *Tendencies in trade union development.* Quart. Journ. Univ. N. Dak., Jan., 1919. Pp. 12. Traces the evolution of fraternal organizations in certain trades into trade unions.

Kendall, H. P. *New basis for industrial relations.* Am. Contractor, Dec. 28, 1919. Pp. 17. Discusses establishment of federal industrial courts as in Australia.

Kerby, C. E. *Wage earning school children in Detroit and Grand Rapids.* Child Lab. Bull., Aug., 1918. Pp. 8.

Lescohier, D. D. *The supply of labor after the war.* Am. Lab. Legis. Rev., Mar., 1919. Pp. 10. Opposes any relaxation of the immigration laws.

Parkinson, T. I. *Constitutionality of treaty provisions affecting labor.* Am. Lab. Legis. Rev., Mar., 1919. Pp. 14.

Powell, T. R. *Collective bargaining.* Pol. Sci. Quart., Sept., 1918. Pp. 29. A review of three decisions of the Supreme Court in labor cases, curtailing the right of unions to force themselves on employers—showing the trend of judicial decision.

Robinson, A. *Substituted labour of women, 1914-1917.* Trans. Manchester Stat. Soc., 1917-18. Pp. 21.

Sinha, J. C. *Indian guilds.* Bengal Econ. Journ., Sept., 1918. Pp. 15. The history, present state and influence of the guilds.

Tead, O. *The United States employment service and the prevention of unemployment.* Am. Lab. Legis. Rev., Mar., 1919. Pp. 14. Stresses the importance of an organization which will regularize employment.

Tipper, H. *Real labor representation.* Automotive Indus., Dec. 12, 1918. Pp. 4. Analysis of Midvale Steel & Ordnance Company's plan.

Wehle, L. B. *War labor policies and their outcome in peace.* Quart. Journ. Econ., Feb., 1919. Pp. 22. Carries the history of war labor in an earlier number, to the end of the war.

American Federation of Labor reconstruction program. Am. Fed., Feb., 1919. Pp. 14.

Awards and findings of the National War Labor Board. Mo. Lab. Rev., Nov., 1918. Pp. 8.

Federal policy in the employment of women. Mo. Lab. Rev., Nov., 1918. Pp. 9.

How labor representation operates. Iron Trade Rev., Dec. 12, 1918. Pp. 2. Presents plan adopted by Youngstown Sheet and Tube Company.

Minimum wage decrees in California, Oregon, and Washington. Mo. Lab. Rev., Nov., 1918. Pp. 8.

New wage adjustment in the shipbuilding industry. Mo. Lab. Rev., Dec., 1918. Pp. 15. Texts of the awards of October 24, 1918.

Postwar labor program of the International Association for Labor Legislation. Mo. Lab. Rev., Nov., 1918. Pp. 7.

The placing and the immigration of agricultural labour. Intern. Rev. Agri., Aug., 1918. Pp. 12. The organization and working of the French bureaus.

The policy of the labour party. New Statesman, Nov. 23, 1918. Pp. 2. Contends that the labour party alone has a policy on the crucial issues.

Trades-union congress, Great Britain. Mo. Lab. Rev., Nov., 1918. Pp. 6. Resumé of the proceedings.

Woman's place in scientific industry. Cassier's Eng. Monthly, Nov., 1918. Pp. 2. Woman's labor after demobilization.

Money, Prices, Credit, and Banking

(Abstracts by Chester A. Phillips)

Alessio, G. *Moneta e prezzi nelle piu' recenti loro manifestazzioni.* Rif. Soc., Nov.-Dec., 1918. Pp. 9.

Avery, W. G. *Acceptances in retail business.* Journ. Account., Feb., 1919. Pp. 5. Shows that acceptances are feasible instruments of credit in practically all lines of commercial business.

Bhimpure, B. L. V. *A state central bank for India.* Wealth of India, Jan., 1919. Pp. 4. A consideration of the arguments for and against the establishment of a central bank in India leads to the conclusion that such an institution operating along European lines would be of inestimable value.

Bolgert, J. *Le chèque postal français.* Rev. d'Econ. Polit., Sept.-Dec., 1918. Pp. 16. A comparison of the French system with the systems of Austria-Hungary, Germany, Switzerland, Belgium.

Bradford, E. A. *Preserving the gold standard by renouncing gold as money.* Annalist, Feb. 17, 1919. Pp. 2. Proposes an international pool of securities for the cabled settlement of trade balances.

Breton, A. *Financial supremacy.* Bank. Law. Journ., Mar., 1919. Pp. 4.

Calvert, N. *The abuse of rural credit and the Punjab remedy.* Bengal Econ. Journ., Sept., 1918. Pp. 13. Historical account of rural credit extravagances and abuses in the Punjab. The Alienation of Land act of 1901 has afforded protection to borrowers.

Cassel, G. *Abnormal deviations in international exchanges.* Econ. Journ., Dec., 1918. Pp. 3. Hindrances put on Sweden's imports and to a less extent on her exports have resulted in an unprecedented accumulation of assets in foreign countries together with a great importation of Swedish securities from abroad. This has involved an exportation of capital beyond the economic power of Sweden.

Dewavrin, M. *Les variations de changes scandinaves depuis le début de la guerre.* Journ. Soc. Stat. de Paris, Oct., 1918. Pp. 7.

Escher, H. *Die Rechnungsabschlüsse von acht grössern schweizerischen Handelsbanken für das Jahr 1917.* Zeitschr. f. Schweiz. Stat. u. Volkswirts., Part 2 & 3, 1918. Pp. 14. A record of expansion and prosperity.

Estey, H. C. *Select bibliography on cost of living in the United States.* Special Libraries, Nov., 1918. Pp. 6.

Evesque, M. *La guerre actuelle et le marche monetaire.* Journ. Soc. Stat. de Paris, June, 1918. Pp. 5.

Firth, A. S. *The increased cost of clothing materials since 1914.* Econ. Journ., Dec., 1918.

Fisher, I. *Rejoinder to Dr. Knibbs' criticisms.* Am. Econ. Rev., June, 1918. Pp. 7.

Fletcher, H. *The war and the price level.* Bank. Mag., Mar., 1919. Pp. 4.

Jannaccone, P. *Relazioni fra commercio internazionale, cambi esteri e circolazione monetaria in Italia nel quartennio 1871-1913.* Rif. Soc., Nov., Dec., 1918. Pp. 78.

Knibbs, G. H. *Consideration of the proposal to stabilize the unit of money.* Am. Econ. Rev., June, 1919. Pp. 12.

Lavergne, B. *La banque d'Algerie. Son activité générale et le renouvellement de son privilège.* Rev. d'Econ. Polit., Sept.-Dec., 1918. Pp. 50. Detailed historical account of the bank's functions and services.

Law, W. T. *Essentials in developing a broad discount market for acceptances.* Trust Companies, Mar., 1919. Pp. 2. Discussion of the handicaps that must be overcome.

Lawrence, F. W. P. *Deflation and prices after the war.* Econ. Journ., Dec., 1918. Pp. 11. Urges a return to the gold standard and the elimination of fluctuations in the general price level through the adoption of the "compensated" money unit.

Penny, D. H., Jr. *The American dollar finding its place in world exchange.* Annalist, Apr. 7, 1919. Pp. 2. The growth of dollar exchange and the factors affecting it.

Polier, L. *Le crédit à l'exportation et le rôle des banques d'outre-mer.* L'Europe Nouvelle, Jan. 11, 1919. Pp. 3. A plea for adequate foreign exchange facilities for French commerce. Laudation of the foreign banking facilities of England and Germany.

Polier, L. *Le problème de la vie chère.* L'Europe Nouvelle, Feb. 15, 1919.

Thulin, F. *Mathematics of credit extension.* Journ. Account., Apr., 1919. Pp. 9. Rules governing the extension of bank credit.

Tinnes, D. J. *An American standard of value: the market gage dollar.* Am. Econ. Rev., June, 1919. Pp. 4.

Wicksell, K. *Gold after the war in relation to inflation and the foreign exchanges.* Econ. Journ., Dec., 1918. Pp. 4. A criticism of the theory that

the movements of the exchanges are determined in the main by "the quotient between the inflation of the different countries."

Willis, H. P. *The federal reserve system in the war year 1918.* Econ. Wld., Feb. 15, 1919. Pp. 3. The method of financing government loans, the growth of the system and its operations, the policy of rationing credit, the conservation of gold, administrative changes, earnings.

Withers, H. *Dépôts en banque et "currency notes" en Angleterre.* Rev. d'Econ. Polit., Sept.-Dec., 1918. Pp. 4. The advance of the banks to the government have increased the volume of bank deposits to such an extent that a larger reserve has been rendered necessary. The additional reserve has been furnished by the emission of currency notes.

Wyse, R. C. *The future of London as the world's money market.* Econ. Journ., Dec., 1918. Pp. 11. A plea for a generous attitude toward the active presence in London of banks of all nationalities.

Les avances faites à l'état par la banque de l'Algerie pendant la guerre. Rev. Sci. Légis. Finan., Oct., Nov., Dec., 1918. Pp. 8.

The committee on financial facilities. Journ. Inst. Bankers, Feb., 1919. Pp. 11. Summary of report.

Les finances de la Ville de Paris. Perspectives sur les budgets futurs. L'Econ. Franc., Feb. 8, 1919. Pp. 2.

Financial facilities after the war. Bank. Mag. (London), Feb., 1919. Pp. 10. The conclusions and recommendations of the Vassar-Smith committee on financial facilities after the war.

Gold production committee. Journ. Inst. Bank., Feb., 1919. Pp. 4. The decline in the gold production of the British empire, 1917 and 1918, was due to a shortage of explosives and to increased costs of production. A subsidy would be unscientific and unjustifiable.

Some objections to fixing prices by regulating credit. Annalist, Mar. 3, 1919. Pp. 2.

Les opérations de la Banque de France pendant l'année 1918. L'Econ. Franc., Mar. 1, 1919. Pp. 4. An instalment of the annual report to the shareholders.

The part of the banks in the development of British industry and trade after the war. Econ. Wld., Feb. 15, 1919. Pp. 3. The British Trade Corporation not yet an integral part of the financial machinery of England should be supplemented and assisted by the joint stock banks.

The progress of banking in Great Britain and Ireland during 1918. I. Bank. Mag. (London), Feb., 1919. Pp. 11. Growth of capital and reserves.

Public Finance

(Abstracts by Charles P. Huse)

Angrisani, G. *Una possible soluzione del problema doganale: i buoni d'importazione.* Giorn. d. Econ., Nov., 1918. Pp. 10.

Breadner, R. W. *The Canadian business profits and income war tax acts.* I, II. Bull. Nat. Tax Assoc., Jan., Feb., 1919. Pp. 5, 4. Deals with the administrative provisions of the business profits tax.

BROWN, A. O. *The taxation of incomes under the New Hampshire constitution.* Bull. Nat. Tax Assoc., Feb., 1919. Pp. 6. A critical account of the recent movement for tax reform in this state.

BURNHAM, W. W. *The four mills tax in Providence, R. I.* Bull. Nat. Tax Assoc., Mar., 1919. Pp. 2. Has proved more productive than the old system in both good feeling and revenue.

CHASE, O. H. *Motor vehicle taxation.* Bull. Nat. Tax Assoc., Mar., 1919. Pp. 4. In most states taxed as personal property; proceeds generally applied to roads.

CLARK, A. B. *Dominion and provincial revenues.* Bull. Nat. Tax Assoc., Jan., 1919. Pp. 3. The Dominion should not seek to deprive Canadian provinces of the right to levy income taxes.

FAIRCHILD, R. F. *The public finance of Santo Domingo.* Pol. Sci. Quart., Dec., 1918. Pp. 21. An excellent survey of economic, political, and financial conditions. Poverty, primitive economic methods, and chaos in land titles hamper the American military government in its attempts at tax reform.

FREY, M. F. *Possible unfortunate effects of the war revenue bill in respect of assumed, but unrealized profits.* Econ. Wld., Jan. 25, 1919. Pp. 2. Discusses possible difficulties in allowing for materials or construction purchased at wartime prices.

GINI, C. *Sul presumibile ammontare dei danni di guerra.* Giorn. d. Econ., Jan., 1919. Pp. 54. The Italian claim to a war indemnity.

GRIZZIOTTI, B. *L'imposte sulla ricchezza dopo lo guerra.* Giorn. d. Econ., Feb., 1919. Pp. 48. Not only must far-reaching changes take place in the Italian tax system, to meet the charges left by the war, but a new system of tariffs must be devised.

HOARE, A. *Prospects of national taxation.* Journ. Inst. Bank., Mar., 1919. Pp. 8. England must meet her heavy normal expenditures mainly by heavy direct taxes.

HOLCOMB, A. E. *Observations on the taxation of public service corporations by a progressive rate on gross receipts.* Bull. Nat. Tax Assoc., Feb., 1919. Pp. 4. Presents arguments against the use of progression in such taxes.

HOLZACH, C. *Die Steuerverteilung und Steuerbelastung in der Schweiz vor Ausbruch des Weltkrieges.* Zeitsch. f. Schweiz. stat. u. Volkswirts., Parts 2 & 3, 1918. Pp. 52. A statistical study of Swiss taxation since 1874 with the object of finding out the principles which should be followed in dividing the tax authority between federation, canton and commune.

HOWE, S. T. *Some problems in connection with full valuation.* Part I. Bull. Nat. Tax Assoc., Mar., 1919. Pp. 4. Urges that assessors be appointed, not elected.

JEZE, G. *Examen de quelques théories nouvelles sur les emprunts de guerre.* Rev. Sci. Législ. Finan., Oct., Nov., Dec., 1918. Pp. 64. A critical examination of the policies of different governments with regard to the rôle of taxation, the rate of interest, the forced loan and the emission of a loan below par.

J., G. *Les finances de guerre de l'Angleterre.* Rev. Sci. Légis. Finan., Oct., Nov., Dec., 1918. Pp. 34. Brings the study down to the beginning of the armistice.

Levy, R. G. *Finances de paix.* Rev. des Deux Mondes, Jan. 15, 1919.

Maxwell, A. J. *Taxation of incomes in North Carolina.* Bull. Nat. Tax Assoc., Mar., 1919. Pp. 5. Advocates a change in the state constitution to permit taxation of unearned income.

Meech, H. W. *Municipal assessments and taxation in Alberta.* West. Munic. News, Dec., 1918. Pp. 3.

Neymarck, A. *Les milliards de la guerre.* Journ. Soc. Stat. de Paris, Apr., 1918. Pp. 27. Describes the sources of French revenues in 1870 and in the present war. Confident in the financial future of the French people.

Pigou, A. C. *The burden of war and future generations.* Quart. Journ. Econ., Feb., 1919. Pp. 14. Future generations will suffer less from lack of capital and the repressive effects of taxes, if war expenditures are met by tax levies rather than by loans.

Raiga, M. *Les finances et le régime fiscal de guerre de l'Angleterre.* Journ. Soc. Stat. de Paris, Jan., 1919. Pp. 16. In this great crisis England has remained true to her excellent fiscal ideals.

Raffalovich, A. *Finances bolcheviques en 1918.* Journ. des Econ., Feb. 15, 1918. Pp. 4. Characterized by tremendous deficits, large military appropriations, lack of financial control, and enormous issues of paper money.

Raffalovich, A. *Quelques aspects économiques de l'Allemagne et de l'Autriche.* L'Econ. Franç., Mar. 8, 1919. Pp. 3. Austrian finances have been brought to desperate straits by tremendous issues of paper money, great war debts, and the dissolution of the old empire.

Suret, L. *La situation financière et les declarations de M. Klotz.* L'Europe Nouvelle, Mar. 1, 1919. Pp. 4. A critical examination of the French financial situation does not clearly show the grounds for the optimism expressed by M. Klotz.

Yves-Guyot. *Les finances de guerre des Etats-Unis.* Journ. Soc. Stat. de Paris, Aug., Sept., 1918. Pp. 19. Deals with taxation and loans during the first year of the war.

Zoller, J. F. *Taxable net income under the New York law.* Bull. Nat. Tax Assoc., Jan., 1919. Pp. 4. A construction of the term "taxable net income" so used in the New York corporation tax law.

The assessment question and "public opinion" in Toronto. Bureau Munic. Research, Bull. No. 70, Nov., 1918. Pp. 19.

Exemption of Liberty bonds from state taxation of banks. Journ. Am. Bank Assoc., Jan., 1919. Pp. 4. Discusses recent decisions.

Federal taxation for regulation and social adjustment. Columbia Law Rev., May, 1918. Pp. 6. A survey of the aim of different tax impositions, social, punitive, or revenue producing, as viewed by judicial interpretation.

Increasing municipal revenue. Munic. Journ., Feb. 15, 1919. Pp. 3. Why

higher per capita revenues are necessary, methods employed by the larger cities of the country for increasing revenue—delinquent taxes—exemptions—license taxes on various kinds of business.

Les méthodes financières de guerre de l'Angleterre, des Etats-Unis et de l'Empire Allema- . Rev. Sci. Légis. Finan., Oct., Nov., Dec., 1918. Pp. 34. Translation of a report made by Sir Edward Holden, president of the London City and Midland Bank to the stockholders.

The Minnesota classification law. Bull. Nat. Tax Assoc., Mar., 1919. Pp. 3. The tax commission reports that this law of 1913, which assesses different classes of property at different percentages of the full value, has proved successful.

Proposed executive state budget. Calif. Taxpayers' Journ., Feb., 1919. Pp. 3. In support of a bill introduced in the California legislature.

The question of what Germany should pay towards the loss and cost of the war. Econ. Wld., Jan. 11, 1919. Pp. 3. Considers her ability to pay and the effect of these payments upon industry in allied countries.

Population and Migration

(Abstracts by A. B. Wolfe)

Belford, J. L. *The immorality of birth control.* Cath. Char. Rev., Apr., 1918. Pp. 3. The usual Catholic arguments against birth control.

Bodio, L. *Dei problemi del dopo guerra relativi all' emigrazione.* Giorn. d. Econ., Oct., 1918. Pp. 13. As demobilization will be slow, emigration will be resumed only gradually. It will avoid some of its former courses or will follow them only sparingly and will expand in the direction of the Adriatic and Mediterranean lands.

Brunhes, J. and Vallaux, C. *German colonization in eastern Europe.* Geog. Rev., Dec., 1918. Pp. 16. Colonization "through social control" in the Baltic Provinces, economic colonization in the Ukraine.

Courmont, J. *La guerre et la repopulation.* Le Musée Social, Memo. & Docs., Jan., 1918. Pp. 30. Comparison of French and German vital statistics, and a plea for a higher birth rate and a lower death rate in France. Appeal to fear of continued German peril in the future.

Dewavrin, M. *L'immigration aux Etats-Unis depuis 1914.* Rev. d'Econ. Polit., Sept.-Dec., 1918. Pp. 3. Predicts that scarcity of labor will cause the repeal of the literacy test.

Doucet, R. *Les migrations causées par la guerre.* Le Monde Econ., Aug. 10, 1918. Pp. 3. The south of France has gained in population; the devastated areas will again be the center of industry and dense population because of favorable location and naturally fertile soil; France will gain some foreign population brought in by the war.

Dublin, L. I. *The mortality of childhood.* Quart. Pub. Am. Stat. Assoc., Mar., 1918. Pp. 25. An important study by year of life and cause of death.

Ellis, H. *Birth control in relation to morality and eugenics.* Birth Control Rev., Feb., 1919. Pp. 2. Every attempt to discourage birth control promotes abortion.

Farnham, D. T. *Negroes a source of industrial labor.* Indus. Manag., Aug., 1918. Pp. 7. How to handle negro labor in industry. Of interest because of the wartime importation of southern negroes into northern factories. Does not consider the social or the deeper economic phases of the movement.

Goldstein, N. W. *Birth control as a socio-economic panacea.* Intern. Journ. Ethics, July, 1918. Pp. 6. Modern political economy has irrefutably and infallibly shown that overpopulation and poverty spring exclusively from social and economic sources.

Harrington, T. F. *Health in war industries.* Boston Medical & Surgical Journal, April 4, 1918. Pp. 5.

Haynes, G. E. *Negroes move North. I. Their departure from the South.* Survey, May 4, 1918. Pp. 8. Migration due not only to industrial conditions but to bad conditions in the South.

Huber, M. *Les territoires et les peuples enlevés à la Russie.* Journ. Soc. Stat. de Paris, May 1918. Pp. 5. A demographic survey of the territory surrendered by Russia in the Brest-Litovsk treaty.

Hunter, A. *Observations on the influenza epidemic.* Econ. World, Feb. 15, 1919.

Insolera, F. *Sulla misura dell'aumento di mortalità per effeto indiretto della guerra.* Riv. Ital. di Soc., Jan.-June, 1918. Pp. 7.

Jones, C. E. *A genealogical study of population.* Quart. Pub. Am. Stat. Assoc., Dec., 1918. Pp. 19. A valuable contribution to American vital statistics; based on family records.

Keegan, R. F. *The problem of illegitimacy.* Cath. Char. Rev., Nov., 1918. Reviews the illegitimacy statutes of Norway and Minnesota and a bill pending in the Illinois legislature.

Meuriot, P. *La population et la representation parliamentaire aux Etats-Unis.* Journ. Soc. Stat. de Paris, Nov., 1918. Pp. 13. A review of population growth in relation to political representation and the geographical distribution of Republican and Democratic strength.

Meuriot, P. *Le suicide à Paris avant et pendant la guerre.* Journ. Soc. Stat. de Paris, Oct., 1918. Pp. 15. A careful statistical study. Decline in the suicide rate which started in 1899 was sharply accentuated by the war.

Meuriot, P. *L'immigration contemporaine au Canada; son caractère nouveau et ses conséquences.* Journ. Soc. Stat. de Paris, June, 1918. Pp. 11. Thirty-seven per cent of the 3,000,000 immigrants, 1901-1916, have come from the United Kingdom, 35 per cent from the United States, as a result of an immigration policy designed to build up west Canada and counterbalance the French Canadians.

Meuriot, P. *Variété: Composition et répartition de la population étrangère en Suisse.* Journ. Soc. Stat. de Paris, Jan., 1918. Pp. 3. Nationality and

geographical distribution of the large influx of foreigners into Switzerland in the past 30 years.

NATHAN, E. *Lancashire vital statistics as disclosed by the last census.* Trans. Manchester Stat. Soc., 1917-18. Pp. 26. Discusses the unfavorable features of Lancashire mortality as compared with the rest of England. Constructs a Lancashire Life Table, 1912.

O'MALLEY, A. *Irish vital statistics in America.* Studies (Dublin), Dec., 1918.

POLLOCK, H. M. *Statistical work in the office of the Surgeon General of the Army.* Quart. Pub. Am. Stat. Assoc., June, 1918. Pp. 4. Discusses changes and extensions due to increase in the army in wartime.

POOCK, A. *Certain influences affecting the national rate of population.* Trans. Manchester Stat. Soc., 1917-1918. Pp. 28. Contains nothing new.

REUTER, E. B. *The superiority of the mulatto.* Am. Journ. Sociology, July, 1917. Pp. 24.

ROTH, L. V. *The growth of American cities.* Geog. Rev., May, 1918. Pp. 15. Comparative outline of the growth of the leading American cities.

SCHERESCHEWSKY, J. W. *Methods of prevention and control of disease in war industries.* Medical Record, Apr. 6, 1918. Pp. 3.

SCHROEDER, T. *Birth control and the great war.* Birth Control Rev., March, 1919. Pp. 5. Also, in *American Medicine,* December, 1918. An able article showing the results of the neo-feudal attitude on population and the vicious circle, population- trade- colonies- armies- population.

SINGH, MRS. ST. NIHIL. *Children; the greatest national asset.* Wealth of India, Sept., 1917.

WALLIS, B. C. *The people of Austria.* Geog. Rev., July, 1918. Pp. 14 and 5 folding maps. Physical configuration, distribution of the people, racial constitution, demographic and vital statistics, claims of the subject races.

WALLIS, B. C. *The peoples of Hungary: their work on the land.* Geog. Rev., Dec., 1917. Pp. 17. Geographical influence on peoples and industry.

WOODBURY, R. M. *Infant mortality studies of the Children's Bureau.* Quart. Pub. Am. Stat. Assoc., June, 1918. Pp. 24. A critical exposition of methods of investigation, and a constructive study of statistical results. A valuable article.

Rural property and the problem of colonization in Argentina. Intern. Rev. Agri. Econ., Apr., 1918. Pp. 8. Deals with the government's effort to encourage colonization and agriculture by discouraging land speculation. Concentration of land ownership in a few hands remains an evil.

Vital and sickness statistics for Germany and Austria during the war. Mo. Lab. Rev., May, 1918. Pp. 4. Review of German articles on the influence of the war on births and deaths.

Insurance and Pensions

(Abstracts by Henry J. Harris)

Bellom, M. *Chronique des questions ouvrières et des assurances sur la vie.* Journ. Soc. Stat. de Paris, Dec., 1918. Pp. 3.

Clark, L. D. *Lack of uniformity in compensation legislation.* Mo. Lab. Rev., Nov., 1918. Pp. 13. Excellent resumé of the bizarre features of our American laws and of the crying need for improvement.

Englar, D. R. *The "proximate cause" of accident in marine insurance.* Econ. World, Feb. 1, 1918. Pp. 3. Decisions on this point including accidents due to war causes.

Englar, D. R. *The "proximate cause" of accident in marine insurance.* Am. Underwriter, Feb., 1919. Pp. 6.

Gebhart, W. F. *Meeting the question of government insurance.* Econ. World, Jan. 25, 1919. Pp. 2. Question is now a live issue; private insurance should prepare to meet it.

Kingston, G. A. *"Arising out of and in course of employment."* Mo. Lab. Rev., Nov., 1918. Pp. 13. English, American, and Canadian rulings.

Langstaff, M. P. *The war-time experience of the Canadian life insurance companies.* Econ. World, Jan. 18, 1919. Pp. 3. Market value of securities has seriously decreased. The mortality has increased from 25 to 30 per cent. Expense ratio has increased. At first the dividends on participating policies were kept up to the usual rate, but have lately been scaled down.

Lapp, J. A. *Health and old age insurance in Ohio.* Am. Lab. Legis. Rev., Mar., 1919. Pp. 11. Summary of the information collected by the Ohio commission.

Lindsay, S. M. *Next steps in social insurance in the United States.* Am. Lab. Legis. Rev., Mar., 1919. Pp. 7. War risk insurance law should be starting point for life insurance for federal employees, for a system of health insurance for them and for the establishment of health, accident, invalidity and old age insurance for wage-earners.

McFee, J. *An analysis of the government's war risk and converted regular life insurance of soldiers and sailors.* Econ. World, Mar. 1, 1919. Pp. 4. Based on recent circular of War Risk Bureau.

Meeker, R. *Lacks in workmen's compensation.* Am. Lab. Legis. Rev., Mar., 1919. Pp. 11. Absence of laws in some jurisdictions, the intolerable position of the railway employees, the status of the maritime workers, the exclusion of many occupations, the methods of administration, etc., show that the operation of compensation laws in the United States is far from satisfactory.

Rice, E. E. *Group insurance for the industrial worker.* Indus. Manag., Mar., 1919. Pp. 3. Provisions to be included, methods of paying claims, cost and results.

Stoddard, C. F. *Hernia as a factor in workmen's compensation awards.* Mo. Lab. Rev., Nov., 1918. Pp. 14. Summary of laws, review of decisions and

awards, statistics of cases and proposal for more general use of medical examination when entering employment.

Voll, J. A. *The liability insurance companies caught in outrageously profiteering against the national government in war contract work.* Am. Fed., Jan., 1919. Pp. 5. The government has been overcharged $1,575,578 on cantonment construction alone.

Direct settlements. Survey, Apr. 12, 1919. P. 1. This clause in the New York compensation has produced many cases of injustice to the injured workman.

Health insurance. Survey, Mar. 22, 1919. Pp. 2. Summary of Ohio commission's recommendations and of the features of the Davenport-Donahue bill in New York.

Statistics

de Beronville, L.Dugé. *Essai d'évaluation de la production industrielle en France avant la guerre.* Bull. Stat. Gén. de la France, Oct., 1918. Pp. 22.

Carr, E. B. *Comparison of food costs in 45 cities, September, 1917, to August, 1918.* Mo. Lab. Rev., Nov., 1918. Pp. 11.

Coats, R. H. *The national wealth and income of Canada, compared with other countries.* Econ. Wld., Feb. 8, 1919. Pp. 2. Valuable summary with exhaustive statistics.

Guilfoy, W. H. *Statistics of the epidemic of influenza in New York City.* N. Y. City Mo. Bull. Health Dept., Dec., 1918. Pp. 12.

Meuriot, P. *Le recensement de l'an II.* Journ. Soc. Stat. de Paris, Feb., Mar., 1918. Pp. 22, 20.

Pangburn, W. W. *Pulmonary tuberculosis among tenement dwellers in Boston.* The Commonwealth (Mass. State Dept. Health), Dec., 1918. Pp. 5.

Papps, P. C. H. *Effect of grouping in graduation by osculatory interpolation.* Quart. Pub. Am. Stat. Assoc., Dec., 1918.

SIXTEENTH LIST OF DOCTORAL DISSERTATIONS IN POLITICAL ECONOMY IN PROGRESS IN AMERICAN UNIVERSITIES AND COLLEGES

Students whose period of continuous non-residence exceeds three years are omitted from the list. The last date given is the probable date of completion.

The first list of this kind was dated January 1, 1904, and was sent to all members, but not regularly bound in the publications. The subsequent lists have appeared in the publications as follows:

Second list, 1905, in third series, vol. iv, p. 737.
Third list, 1906, in third series, vol. vii, no. 3, supplement, p. 43.
Fourth list, 1907, in third series, vol. viii, no. 2, supplement, p. 42.
Fifth list, 1908, in the *Bulletin* for April, 1908, p. 69.
Sixth list, 1909, in the *Bulletin* for April, 1909, p. 16.
Seventh list, 1910, in the *Bulletin* for March, 1910, p. 12.
Eighth list, 1911, in the Review for March, 1911, p. 212.
Ninth list, 1912, in the Review for June, 1912, p. 519.
Tenth list, 1913, in the Review for June, 1913, p. 527.
Eleventh list, 1914, in the Review for June, 1914, p. 524.
Twelfth list, 1915, in the Review for June, 1915, p. 476.
Thirteenth list, 1916, in the Review for June, 1916, p. 499.
Fourteenth list, 1917, in the Review for June, 1917, p. 485.
Fifteenth list, 1918, in the Review for June, 1918, p. 459.

Theory and Its History

Wilbur Pere Calhoun, Ph.B., Hiram, 1913; A.M., Michigan, 1914. Theories of imputation. 1919. *Michigan.*

Frieda Fligelman, A.B., Wisconsin, 1910. The principle of participation; a critique of "Les fonctiones mentales dans les sociétés inférieures," the thesis advanced by L. Levy-Bruhl. 1920. *Columbia.*

Joseph Bradley Hubbard, A.B., Wisconsin, 1912; A.M., 1913. History of economic thought during the Middle Ages. *Harvard.*

Hazel Kyrk, Ph.B., Chicago, 1910. The consuming process under the present industrial system. 1919. *Chicago.*

Leland Rex Robinson, A.B., Columbia, 1915. The social principle of municipal monopoly charges. 1920. *Columbia.*

George Herbert Roller, A.B., Ph.B., Northwestern College, 1910. The general economic theories underlying the decisions of the Supreme Court. 1920. *Columbia.*

J. Franklin Thomas, A.B., Beloit, 1904. Theories concerning the influence of physical environment upon society. 1919. *Columbia.*

Economic History and Geography

Alexander Mathews Arnett, A.B., Mercer, 1908; A.M., Columbia, 1913. The Populist movement with special reference to the state of Georgia. 1920. *Columbia.*

R. G. Booth, A.B., Illinois Wesleyan, 1914; A.M., Columbia, 1915. Some social aspects of the development of the natural sciences in England in the eighteenth century. 1919. *Columbia.*

Witt Bowden, A.B., Colorado, 1914. The rise of the great manufactures in England from 1760 to 1790. 1919. *Pennsylvania.*

Eleanor C. Buckley, A.B., Texas, 1908; A.M., Pennsylvania, 1909. The economic forces underlying Latin-American independence. 1920. *Pennsylvania.*

Merton Kirk Cameron, A.B., Princeton, 1908; A.M., Harvard, 1914. History of the tobacco growing industry in the United States. *Harvard.*

Anna C. Clouder, A.B., Bryn Mwr, 1905. The Napoleonic Wars as reflected on the commerce to Philadelphia and New York from 1806 to 1812. 1919. *Pennsylvania.*

Sarah White Davis, A.B., Mount Holyoke, 1909; M.A., 1910. A study of asserts in England during the thirteenth and fourteenth centuries. 1919. *Radcliffe.*

Frederick Charles Dietz, A.B., Pennsylvania, 1909; A.M., Harvard, 1912. The condition of the peasant in Würtemberg and the peasant revolt of 1525. *Harvard.*

Clarence G. Dittmer, Ph.B., Hamlin, 1910. A socio-economic survey of living conditions in North China. 1919. *Wisconsin.*

H. C. Engelbrecht, Concordia Seminary, 1917. Economic aspects of anticlericalism in Southwest Germany during the fourteenth and fifteenth centuries. 1919. *Chicago.*

Priscilla Hawthorne Fowle, A.B., Vassar, 1916; A.M. Radcliffe, 1917. Boston journalism, 1830-1850. 1920. *Radcliffe.*

William E. Garnett, A.B., Cornell, 1913; A.M., Peabody, 1916. Rural social survey of Albemarle county, Virginia. 1919. *Wisconsin.*

J. E. Gillespie, A.B., Cornell, 1909; A.M., Harvard, 1910. The influence of oversea expansion on England to 1700. 1919. *Columbia.*

Howard Charles Green, A.B., College of the City of New York, 1902. The radical movement of the American Revolution. 1919. *Columbia.*

H. E. Grimshaw, B.S., Columbia, 1914; A.M., 1915. Influence on England of India under the rule of the Company. 1919. *Columbia.*

Joyce Oramel Hertzler, A.B., Baldwin-Wallace, 1916. The Jewish prophets and Apocalyptists as forerunners of the Utopians. 1919. *Wisconsin.*

Leland Jenks, A.B., Ottawa, 1913; A.M., Kansas, 1914. Social aspects of the Revolution of 1688-1689 in England. 1919. *Columbia.*

L. A. Lawson, A.B., Upsala, 1909; A.M., Columbia, 1911. Social conditions in the principate of Augustus. 1919. *Columbia.*

Lucy Lewis, A.B., Bryn Mawr, 1893; A.M., Pennsylvania, 1915. The continental systems and French industry. 1919. *Pennsylvania.*

A. S. Neumann, A.B., Columbia, 1909; A.M., 1912. Jewish communal life in Spain during the thirteenth century. 1919. *Columbia.*

Isabel McKenzie, A.B., Barnard, 1912; A.M., Columbia, 1914. Social activities of English Friends in the period of industrial revolution. 1920. *Columbia.*

E. C. Macklin, A.B., Indiana, 1911; B.F., Union Theological, 1914. Social and philanthropic work of the church of Scotland in the 16th century. 1919. *Columbia.*

May Baker Marsh, A.B., Michigan, 1908; A.M., 1910. Folkways in art. 1919. *Columbia.*

Thomas P. Martin, A.B., Leland Stanford, 1913; A.M., California, 1914. The confirmation of foreign land titles in the acquired territory of the United States. *Harvard.*

R. L. Meriweather, A.B., Wofford, 1912; A.M., Columbia, 1914. The southwest frontier, 1740-1776. 1919. *Chicago.*

Parker T. Moon, B.S., Columbia, 1913. Development of the political and social program of the *Action Libérale* in modern France. 1920. *Columbia.*

Leland Olds, A.B., Amherst, 1912. Social unrest in England, 1811-1819. 1919. *Columbia.*

O. H. Pannkoke, A.B., Concordia, 1905. The interrelation of the reformation and the social movement in Saxony. 1919. *Columbia.*

Giko Sakamoto, B.S., Tung Wen College (Shanghai); A.M., Southern California, 1913. Economic history of Japan, 1868-1907. 1920. *Columbia.*

Donald W. Sawtelle, B.S., Maine, 1913; A.M., Wisconsin, 1915. A rural survey of Dane county, Wisconsin. 1920. *Wisconsin.*

H. L. Scott, Ph.B., Denison, 1911. The social influence of oversea expansion on France to 1785. 1919. *Columbia.*

Russell Gordon Smith, A.B., Richmond, 1911; A.M., Columbia, 1914. A sociological study of opinion in the United States. 1919. *Columbia.*

O. C. Stine, Ph.B., Ohio, 1908. Economic history of corn products in the United States. 1919. *Wisconsin.*

Kryiakos Pan Tsolainos, Bachelor of Commerce, American College of Smyrna; A.B., McGill, 1918. The economics of Homer. 1921. *Columbia.*

William Ernest Weld, A.B., College of Wooster, 1903; A.M., Princeton, 1908; B.D., Princeton Seminary, 1909. The economic development of India by better means of communication. 1920. *Columbia.*

Levi Edgar Young, S.B., Utah, 1895. The social and economic development of Utah under the leadership of Brigham Young. 1920. *Columbia.*

Agriculture, Mining, Forestry, and Fisheries

O. C. Ault, A.B., Defiance, 1911. The peanut industry in the United States. 1919. *Wisconsin.*

Edgar Bernard Brossard, B.S., Utah Agricultural, 1911; M.S., Minnesota, 1917. Types of irrigation farming. 1919. *Minnesota.*

A. B. Cox, A.B., Texas, 1911; A.M., 1914. Land problems in northern Wisconsin. 1920. *Wisconsin.*

Wilber John Fraser, A.B., Illinois, 1893; S.M., 1902. Farm incomes in the dairy regions about the Elgin district in Illinois. *Harvard.*

Clarence L. Holmes, A.B., Michigan. History of land tenure in South Dakota. 1919. *Wisconsin.*

E. A. Kincaid, A.B., Washington State, 1910; M.A., Harvard, 1911. Land tenure in California. 1920. *California.*

Mabel T. Lee, A.B., Barnard, 1916; A.M., Columbia, 1917. Intensive agriculture in China. 1919. *Columbia.*

Paul Mehl, A.B., Oregon Agricultural College, 1915. National agricultural policies: what a nation produces. 1919. *Wisconsin.*

Frederic Earnest Richter, A.B., Harvard, 1913. The copper industry. *Harvard.*

Raleigh S. Rife, A.B., Doane, 1909. Cotton production and prices. 1919. *Princeton.*

Kurt von Schenk, A.B., Harvard, 1913. M.S. in Agriculture, Cornell, 1917. Agricultural income. 1919. *Cornell.*

R. P. Teele, A.B., Nebraska, 1897; M.A., 1899. Irrigation finance. 1921. *California.*

Thomas Jackson Woofter, Jr., A.B., Georgia, 1912. Negro farm life in Georgia. 1919. *Columbia.*

Ivan Wright, A.B., Iowa State, 1914; B.S., Michigan, 1916; M.S., 1917. Credit in agriculture. 1920. *Cornell.*

Manufacturing Industries

Homer Hoyt, A.B., Kansas, 1913; A.M., 1913. The building industry in the United States during the war. 1919. *Chicago.*

Robert Herbert Loomis, A.B., Clark, 1911. The shoe industry in Massachusetts since 1875. *Harvard.*

Maria Alexandria Stappert, A.B., St. Ursula College, Aix-la-Chapelle. Economic location of the textile industry in the United States. 1920. *Columbia.*

Transportation and Communication

H. A. Blankenship, A.B., Marietta, 1914. The Georgian Bay Ship canal. 1920. *Chicago.*

Yu Meng Chen, A.B., Nanking, 1914; A.M., Butler College, Indianapolis, 1916. Problems of ocean transportation. 1920. *Columbia.*

Charles Cloyd Creekpaum, A.B., Nebraska, 1912. Financial results of state railways. *Harvard.*

Howard Douglas Dozier, B.A., Vanderbilt, 1908; M.A., Yale, 1916. History of the Atlantic Coast Line System. 1919. *Yale.*

Robert Craig Effinger, A.B., Virginia, 1914. Railways and business cycles. 1920. *Columbia.*

Harold Adams Innis, A.B., McMaster, 1916; A.M., 1918. History of the Canadian Pacific Railroad. 1920. *Chicago.*

Sidney L. Miller, A.B., Kansas State Normal College, 1912; A.M., Wisconsin, 1916. Railroad credit. 1919. *Wisconsin.*

L. C. Sorrell, A.B., Colgate, 1911. Private car lines. 1920. *Chicago.*

W. M. W. Splawn, A.B., Baylor, 1906; A.B., Yale, 1908; A.M., 1914. A study of the railroad commission in Texas. 1919. *Chicago.*

Henry W. Van Pelt, A.B., Cornell, 1915; A.M., Columbia, 1917. Local freight discriminations. 1919. *Columbia.*

Trade, Commerce, and Commercial Crises

Everett Clair Bancroft, B.A., Acadia, 1914; Yale, 1915. Trade relations of Canada with the United Kingdom. 1920. *Yale.*

Joshua Bernhardt, B.A., Rochester, 1916. Government control of sugar during the war. 1920. *Johns Hopkins.*

Harry Alonzo Brandt, B.A., Pomona, 1914. The hide and leather trade. 1920. *Yale.*

Wilfred Eldred, A.B., Washington and Lee, 1909; A.M., Harvard, 1911. The regulation of wheat and flour prices and trade during the war. *Harvard.*

Henry Ernst Erdman, B.S., South Dakota State, 1912. Coöperative and municipal marketing of whole milk in the United States and abroad. 1919. *Wisconsin.*

Leighton George Foster, A.B., Lawrence, 1912; A.M. Wisconsin, 1916. Methods of marketing Wisconsin livestock. 1919. *Wisconsin.*

Joseph Henry Foth, A.B., Oklahoma, 1914; A.M., 1914. Trade associations. 1920. *Chicago.*

Milton Hyrum Harris, A.B., Brigham Young, 1915; A.M., Columbia, 1917. Relation of foreign investments and commerce. 1920. *Columbia.*

Jacob Paul Heritage, B.S., Pennsylvania, 1910; A.M., 1918. Terminal markets. 1921. *Pennsylvania.*

Allen Dunning Jennings, A.B., St. Stephens, 1913. Milk supply of New York City. 1919. *Columbia.*

Loyd Helvetius Langston, A.B., Maryville, 1913. Market distribution. 1920. *Columbia.*

Elmer Serano Nelson, A.B., Southern California, 1917. The foreign commericial policy of the United States as it affects its trade relations with the Argentine Republic. 1920. *Yale.*

Andrew J. Newman, A.B., Washington, 1910; M.A., Missouri, 1911. Historical and statistical survey of the port of San Francisco. *California.*

Grace Lee Nute, A.B., Smith, 1917; A.M., Radcliffe, 1918. American foreign commerce, 1830-1860. 1920. *Radcliffe.*

Leona Margaret Powell, A.B., Ohio Wesleyan, 1905. The mail order house. 1919. *Chicago.*

Hugh Bruce Price, B.A., Wisconsin, 1914; M.A., Minnesota, 1916. The inspection and grading of grain. 1920. *Yale.*

William Charles Schluter, A.B., Iowa State, 1915; A.M., Columbia, 1916. A study in business cycles: the industrial conditions of Germany, France, England and the United States from 1907 to July, 1914. 1919. *Columbia.*

Chong Su See, B.S., Columbia, 1915; A.M., Columbia, 1916. The foreign trade of China. 1919. *Columbia.*

Jacob Viner, A.B., McGill, 1914; A.M., Harvard, 1915. The international trade and economic history of Canada, 1900-1914. *Harvard.*

Harold B. Ward, S.B., Chicago, 1914. Geographic influence in the trade between the United States and South America. 1919. *Chicago.*

Holbrook Working, A.B., Denver, 1915. A study of the effects and possible future application of price-fixing in the case of wheat. 1920. *Cornell.*

D. Y. Yapp, A.B., Swarthmore, 1916. Foreign trade of China. *Pennsylvania.*

Accounting, Business Methods, Investments, and the Exchanges

Clarence E. Bonnett, S.B., Missouri, 1908. Employers' associations. 1919. *Chicago.*

Edmund William Bradwin, A.M., Queen's, 1914. Contract system on railroad construction. 1919. *Columbia.*

Lorain Fortney, A.B., LL.B., West Virginia, 1900. Warehousing. 1919. *Chicago.*

William D. Gordon, B.S., Pennsylvania, 1916. Scientific control of stores. 1920. *Pennsylvania.*

Lloyd W. Maxwell, A.B., Oklahoma, 1912; A.M., Columbia, 1916. Government regulation of prices. 1920. *Columbia.*

Nina Miller, A.B., Wisconsin, 1915; M.S., Columbia, 1918. Analysis of financial reports. 1920. *Columbia.*

Claudius Temple Murchison, A.B., Wake Forest College, 1911. Resale price maintenance. 1919. *Columbia.*

Frank Parker, B.S., Pennsylvania, 1911; LL.B., 1915. Theories of depreciation applied to public utilities. 1920. *Pennsylvania.*

John W. Riegel, B.S., Pennsylvania, 1918. Uniform accounting systems for basic industries. 1921. *Pennsylvania.*

Rexford G. Tugwell, B.S., 1915, Pennsylvania; A.M., 1916. The public interest and the price for milk. 1920. *Pennsylvania.*

Capital and Capitalistic Organization

William Lewis Abbott, A.B., Pennsylvania, 1911; A.M., LL.B., 1913. The effect of combinations on the wholesale grocery trade. 1920. *Pennsylvania.*

Leonora Arent, B.D.I., Iowa State Teachers College, 1911; A.B., Iowa State University, 1917. Electric franchises in New York City. 1919. *Columbia.*

James Cummings Bonbright, A.B., Northwestern, 1913. Commission regulation of public utility securities. 1919. *Columbia.*

Harry James Carman, Ph.B., Syracuse, 1913; A.M., 1914. The street railway franchises in New York City. 1919. *Columbia.*

George J. Eberle, A.B., Wisconsin, 1914. The economics of electric railway fares. 1919. *Wisconsin.*

L. A. Frye, A.B., Minnesota, 1907; A.M., 1908. History of the state control of public service corporations in New York. 1919. *Columbia.*

Edgar H. Gustafson, A.B., North Dakota, 1915; A.M., 1916. Economic principles in the valuation of public service corporations. 1919. *Wisconsin.*

Russell Donald Kilborn, A.B., Michigan, 1915; A.M., 1916. The essential conditions for effective monopoly control. 1919. *Michigan.*

Walter Jeffries Matherly, A.B., William Jewell, 1915; A.M., Washington, 1916. Surplus earnings in public service corporations. 1920. *Chicago.*

Charles Stillman Morgan. Methods of promoting and awarding efficiency in the management of public utilities. 1920. *Yale.*

Jonas W. Stehman, A.B., Lebanon Valley, 1909; A.M., Pennsylvania, 1910. History of the American Telephone and Telegraph Company. 1920. *Chicago.*

Floyd L. Vaughan, A.B., Texas, 1913; A.M., 1914. Relation of patents to industrial monopolies. 1919. *Wisconsin.*

Labor and Labor Organizations

Horace Richards Barnes, A.B., Pennsylvania, 1911; M.A., 1913. An economic interpretation of society's attitude toward child labor. 1920. *Pennsylvania.*

Clyde Elmore Burgee, A.B., Western Maryland, 1914. Social activities of trade unionism. 1920. *Johns Hopkins.*

Agnes Mary Byrnes, A.B., Northwestern, 1915; A.M., Columbia, 1916. Industrial home-work in Pennsylvania. 1919. *Bryn Mawr.*

Elizabeth Leland Chamberlain, A.B., Mt. Holyoke, 1914. The International Cigar Makers' Union. 1919. *Chicago.*

Nathan Fine, Ph.B., Chicago, 1915. Labor and politics. 1919. *Chicago.*

Alfred P. Haake, A.B., Wisconsin, 1914; A.M., 1916. Wage measurements and the management of labor. 1919. *Wisconsin.*

Emilie Josephine Hutchinson, A.B., Barnard, 1905; A.M., Columbia, 1908.

Minimum wage legislation as a solution of the wage problem. 1919. *Columbia.*

RICHARD HINES LANSBURGH, B.S., Pennsylvania, 1915; A.M., 1916. Labor turnover. 1920. *Pennsylvania.*

FRED THOMAS LENA, A.B., Dartmouth, 1907; A.M., Columbia, 1915. Economic significance of the entrance of women into industry. 1919. *Columbia.*

E. D. LUCAS, A.M., Columbia; B.D., Union Theological. Factory conditions in the Punjab, India. 1920. *Columbia.*

JAMES HUGH MCKEAN, A.B., Michigan, 1916. Trade unions and the working day. 1921. *Johns Hopkins.*

EDWARD BECKER MITTLEMAN, A.B., Wisconsin, 1914. The history of labor in Chicago. 1919. *Chicago.*

HAYNIE H. SEAY, A.B., Richmond, 1913; A.M., Columbia, 1915. Women and child labor conditions in Virginia. 1920. *Johns Hopkins.*

BENJAMIN M. SQUIRES, A.B., Wisconsin, 1913; A.M., 1914. Canadian industrial disputes investigation act. 1919. *Columbia.*

ARCHIBALD HERBERT STOCKDER, A.B., Colorado, 1915; A.M., 1916. Productivity of labor in the bituminous coal industry. 1920. *Columbia.*

ALFRED H. WILLIAMS, B.S., Pennsylvania, 1915. The influence of the present war on organized labor's share in the management and profits of industry. 1920. *Pennsylvania.*

Money, Prices, Credit, and Banking

LLOYD VERNOR BALLARD, A.B., Beloit, 1912; A.M., Harvard, 1913. Trade acceptances. 1919. *Chicago.*

THOMAS ANDREW BEAL, A.B., Utah, 1906; A.M., Columbia, 1910. The importance of trade and bankers' acceptances in business. 1920. *Columbia.*

HARRY FRANCIS GRADY, A.B., St. Mary's, Baltimore, 1907. The development of commercial paper under the federal reserve system. 1919. *Columbia.*

FRANK DUNSTONE GRAHAM, A.B., Dalhousie, 1913; LL.B., 1915. Period of suspension of specie payments in the United States, 1862-1879. *Harvard.*

RAY OVID HALL, Banking in China. 1919. *Columbia.*

LEONARD B. KRUEGER, PH.B., Wisconsin, 1914; A.M., Pennsylvania, 1915. Inflation. 1919. *Wisconsin.*

RAY VICTOR LEFFLER, A.B., Michigan, 1915: A.M., 1917. The position of New York in international finance. 1920. *Michigan.*

JOSEPH LEE MCDONALD, A.B., Indiana, 1915. Economic limits to the use of the trade acceptance. 1921. *Pennsylvania.*

ROBERT ELWOOD MOORE, A.B., Wesleyan, 1915; A.M., 1916. An investigation of the relation of iron prices to business conditions. 1919. *Columbia.*

JESSE HALE RIDDLE, A.B., Davis-Elkins, 1912; A.M., Princeton, 1915. History of state banks and trust companies in New Jersey. 1919. *Princeton.*

THOMAS BRUCE ROBB, B.A., Park, 1912; M.A., Yale, 1914. Government insurance of bank deposits in the United States. 1919. *Yale.*

NORMAN JOHN SILBERLING, A.B., Harvard, 1914; A.M., 1915. A history of British theories of money and credit, 1776-1848. *Harvard.*

WILLIAM HOWARD STEINER, B.S., Columbia, 1916; A.M., 1917. State banks and the federal reserve system. 1919. *Columbia.*

MARJORIE TAPPAN, A.B., Cornell. Institution of credit. 1919. *Columbia.*

PEI CHIEN YANG, A.B., Michigan, 1917; A.M., 1918. The position of the Federal Reserve Board in the American banking system. 1919. *Michigan.*

Public Finance, Taxation, and Tariff

RHIMARAO EAMJO AMBEDKAR, A.B., Bombay, 1912. Financial history of India. 1920. *Columbia.*

FRANK FERRIS ANDERSON, A.B., Minnesota, 1908. The industrial claims of the single-taxers. 1920. *Columbia.*

RALPH EASTMAN BADGER, B.A., Dartmouth, 1913; M.C.S., 1914. The taxation of tangible personal property under the property tax. 1920. *Yale.*

BASCOM W. BARNARD, A.B., Trinity (N. C.), 1915; A.M., 1916. Government improvements of rivers and harbors. *Princeton.*

ARTHUR EUGENE BUCK, Ph.B., Milligan, 1910; B.S., Tennessee, 1913; A.M., Columbia, 1917. New York budget law. 1919. *Columbia.*

JOHN KSING CHENG, B.S., St. John's (Shanghai), 1917; A.M., Ohio State, 1918. Government finance in China under the Republic, with suggested reforms. 1920. *Columbia.*

CHUNGTAO TAHMY CHU, A.B., Harvard, 1917. The taxation of salt. *Harvard.*

KOCHENG C. CHUNG, A.B., Reed, 1917. Napoleonic war finance in England. 1920. *Columbia.*

REBEKAH P. DAVIS, B.S., Pennsylvania, 1915. The Philadelphia budget. 1920. *Pennsylvania.*

LE GRAND REX DROWN, A.B., Wooster, 1915; A.M., Columbia, 1916. The validity of the pay-as-you-go policy school outlays. 1919. *Columbia.*

FELIX FLUEGEL, A.B., Stanford, 1914; M.A., California, 1917. Types of income tax laws. 1919. *California.*

MARGARET CHASE GOING, B.A., McGILL, 1912; M.A., 1913. The financial history of Montreal. 1919. *Chicago.*

CLARENCE HEER, A.B., Rochester, 1914. Taxable income. 1920. *Columbia.*

FENG HUA HUANG, A.B., Wisconsin, 1917; A.M., 1917. Public debts in China. 1919. *Columbia.*

JENS PETER JENSEN, A.B., Dakota Wesleyan, 1913; A.M., Minnesota, 1917. Twenty years of federal finance, 1897-1916. 1920. *Chicago.*

HOMIN LEOPOLD LIN, A.M., Teachers College, 1917. Administration of the real estate tax in New York City. 1920. *Columbia.*

Wallace Mitchell McClure, A.B., LL.B., Tennessee, 1911. Public finance in Tennessee. 1920. *Columbia.*

A. R. Mead, A.B., Miami; A.M., Columbia, 1910. The development of the free school and the abolition of rate bills in the states of Connecticut and Michigan. 1919. *Columbia.*

Anna Marguerite Michner, A.B., Swarthmore, 1916. The budget system of Frankfort-on-the-Main. 1920. *Columbia.*

Eugene I. Omeltchenko, Polytechnical Institut, Petrograd. Reciprocity of the United States in Germany and France. 1921. *Columbia.*

N. M. Pal, B.S., California, 1916; M.S., 1918. Systems of land tenure and taxation in India. 1921. *California.*

Lloyd Preston Rich, A.B., Wesleyan, 1913; A.M., Harvard, 1914. History of taxation in Connecticut. *Harvard.*

John Valentine Van Sickle, A.B., Haverford, 1913. History of taxation in Massachusetts since 1860. *Harvard.*

Kossuth Mayer Williamson, A.B., Alabama, 1913; A.M., Harvard, 1914. The history of federal internal taxation since 1871. *Harvard.*

Population and Migration

J. C. Bell, Jr., A.B., Princeton, 1912. Migrations to the Northwest, 1830-1850. 1919. *Columbia.*

Louis Bloch, A.B., Wisconsin, 1916; A.M., 1917. Immigration. 1920. *Columbia.*

R. S. Castleman, Ph.B., Chicago, 1914. Early emigration from Spain to America. 1919. *Chicago.*

Alice Squires Cheyney, A.B., Vassar, 1909. Community problems in Pennsylvania towns, with special reference to the assimilation of varied racial groups. 1919. *Pennsylvania.*

Stanley Powell Davies, A.B., Bucknell, 1912. Racial assimilation in a community in the anthracite coal region. 1919. *Columbia.*

J. O. Hall, A.B., Denver, 1903; A.M., 1905. The Norse immigration. 1920. *Columbia.*

Jacub Horak, Ph.B., Chicago, 1916. A study of the Czecho-Slovak community of Chicago. 1920. *Chicago.*

E. B. Reuter, A.B., Missouri, 1910; A.M., 1911. The mulatto; a sociological and psychological study. 1919. *Chicago.*

B. M. Stewart, A.M., Queen's, 1911. Immigration settlement in Canada before Confederation. 1919. *Columbia.*

Donna Fay Thompson, A.B., Indiana, 1913; A.M., 1914. The birth rate in college graduates' families. 1919. *Columbia.*

Amy Eaton Watson, A.B., Brown, 1907; A.M., Pennsylvania, 1910. Illegitimacy—its causes and cure. 1919. *Bryn Mawr.*

Social Problems and Reforms

Georgia Louise Baxter, A.B., Denver, 1914; A.M., California, 1917. Study of desertion and non-support. 1919. *Bryn Mawr.*

H. H. Beneke, A.B., Miami, 1909; A.M., Chicago, 1912. The concept of graft. 1919. *Chicago.*

Hubert Emerson Bice, B.A., Ohio State, 1909; A.M., 1913. The unemployable. 1920. *Ohio State.*

C. D. Blachly, Ph.B., Grinnell, 1908. A study of the types of literature in social study classes of protestant churches. 1920. *Chicago.*

Margaret G. B. Blachly, Ph.B., Chicago, 1912. Present tendencies in social reform. 1919. *Chicago.*

Archibald B. Clark, A.B., Reed, 1916. The popular vote as an index of social solidarity. 1919. *Columbia.*

Alzada Comstock, A.B., Mt. Holyoke, 1910; A.M., Columbia, 1913. The newspaper publishing business. 1920. *Columbia.*

Frieda Opal Daniel, A.B., Drake, 1916. A social study of an industrial area. 1920. *Chicago.*

Harmon, O. De Graff, B.Di., Iowa State Teachers College, 1908; B.A., State University of Iowa, 1916; M.A., 1918. The sociological aspects of the primitive dance. *State University of Iowa.*

Charles Dice, A.B., Ohio Northwestern, 1905; A.M., Northwestern, 1913. New factors affecting the motive to save. 1919. *Wisconsin.*

Z. T. Egartner, A.B., Cincinnati, 1914. Race prejudice in the United States of America. 1919. *Chicago.*

Earl Stanfield Fullbrook, B.A., Morningside, 1914; M.A., State University of Iowa, 1918. The origin and development of the Red Cross movement. *State University of Iowa.*

William Earl Givens, A.B., Indiana, 1913. The social value of the Chatauqua movement. 1919. *Columbia.*

John R. Hart, B.A., M.A., Pennsylvania, 1911. Economic waste in the distribution of Protestant churches. 1921. *Pennsylvania.*

Cary Walker Hayes, A.B., Washburn, 1909; A.M., Columbia, 1912. Public morals and recreation; a municipal program. 1919. *Columbia.*

C. C. Jansen, A.B., Taylor, 1913; A.M., Kansas, 1914. The Americanization of the German Russian Mennonites in central Kansas. 1919. *Chicago.*

Glenn R. Johnson, A.B., Reed, 1915. The American newspaper as an indicator of social forces. 1919. *Columbia.*

Roy Hinman Holmes, A.B., Hillsdale, 1911; A.M., Michigan, 1912. The influence of modern communication upon the rural community. 1920. *Michigan.*

Kinai Matsuno, A.B., Keio University, 1915; A.M., Columbia, 1918. The principle and practice of efficiency in Japan and in the United States. 1920. *Columbia.*

Sumis Mesugi, A.M., Chicago, 1916. The family in Japan. 1919. *Chicago.*

Hazel Grant Ormsbee, A.B., Cornell, 1915. Vocational guidance in the United States with special study of Philadelphia working children. 1921. *Bryn Mawr.*

Rebecca Osler, A.B., Swarthmore, 1913; A.M., Wisconsin, 1916. Protection of professional standards. 1919. *Wisconsin.*

Mabel B. Palmer, B. L., California, 1908; M.L., 1912. Spanish phonography. 1920. *California.*

Herbert Newhard Shenton, A.B., Dickinson, 1906; A.M., 1909; B. D., Drew, 1910. Collective decision. 1920. *Columbia.*

William C. Smith, A.B., Grand Island, 1907; A.M., Chicago, 1912. Special aspects of the Salvation Army movement. 1919. *Chicago.*

Raleigh W. Stone, M.S., Valparaiso, 1914. The rural survey. 1919. *Chicago.*

F. M. Thrasher, A.B., DePauw, 1915; M.A., Chicago, 1918. Boy Scout movement. 1919. *Chicago.*

Mary Van Kleeck, A.B., Smith, 1904. The fact basis for industrial reform. 1919. *Columbia.*

A. C. Zumbrunnen, A.B., Central, 1907; A.M., Missouri, 1909. The community church as a type of denominational union. 1919. *Chicago.*

Insurance and Pensions

T. Coulston Bolton, B.S., Pennsylvania, 1912; A.M., 1917. Assignment of life insurance policies. 1920. *Pennsylvania.*

Charles Gauger, A.B., Pennsylvania, 1908. Economic aspects of accident and health insurance. 1920. *Pennsylvania.*

Edith Scott Gray, A.B., Oberlin, 1911; A.M., 1912. Systems of workingmen's compensation in practice. 1919. *Chicago.*

Charles K. Knight, A.B., Ohio University, 1912; A.M., 1913. History of life insurance in the United States. 1920. *Pennsylvania.*

Edward Laurence McKenna, A.B., Columbia, 1913; A.M., Illinois, 1914. Title insurance in the United States. 1920. *Pennsylvania.*

Paul Studensky, Gymnasium, Petrograd, 1896-1905; University of Petrograd, 1905-1908; University of Sorbonne, 1908-1909; New York University, 1915-1917; Columbia, 1917. Teachers' retirement systems in the United States. 1919. *Columbia.*

George Livingston Williams. Industrial pensions as applied to the leading industries of the United States. 1920. *Columbia.*

Suekichi Yoshida, Shogakushi (A.B.), Waseda University, Japan, 1916. War risk life insurance in the United States. 1920. *Johns Hopkins.*

Pauperism, Charities, and Relief Measures

Porter R. Lee, A.B., Cornell, 1903. Public outdoor relief in the United States. 1919. *Columbia.*

Statistics and Its Methods

Che Kwei Chen, A.B., Cornell, 1918. Census plan for a Chinese province. 1919. *Cornell.*

Frank Alexander Ross, Ph.B., Yale, 1908; A.M., Columbia, 1913. A study of the application of statistical methods to sociological problems. 1920. *Columbia.*

NOTES

Since February 1 the following names have been added to the membership of the American Economic Association:

Adams, Joseph, 7 Lewis Road, Winchester, Mass.
Allen, R. M., 227th St. and Arlington Ave., Spuyten Duyvil, N. Y.
Babu Shiva, Mandan, Sohu St., Benares, India.
Bradley, Albert, Y. M. C. A., Detroit, Mich.
Brinton, Willard C., 21 East 40th St., New York, N. Y.
Bruere, Robert W., 465 West 23d St., New York, N. Y.
Burkhard, E. E., 1153 Magnolia Ave., Elizabeth, N. J.
Burnet, Philip, DuPont Bldg., Wilmington, Del.
Canan, Charles H., Transportation Bldg., Montreal, Canada.
Chamberlain, Elizabeth L., University of Texas, Austin, Texas.
Chassell, E. D., 112 W. Adams St., Chicago, Ill.
Clark, Floyd B., College Station, Texas.
Cleland, J. S., Carroll College, Waukesha, Wis.
Conyngton, Thomas, 20 Vesey St., New York, N. Y.
Copeland, Charles C., Freeport, N. Y.
Das, Rajani Kanta, 6933 S. Chicago Ave., Chicago, Ill.
Davis, O. K., 1 Hanover Sq., New York, N. Y.
Escaler, Jose, 208 San Rafeal, Manila, P. I.
Eskay, I. Henry, 60 Wall St., New York, N. Y.
Fletcher, Henry, 270 Park Ave., New York, N. Y.
Foley, Daniel, 228 Court Road, Winthrop, Mass.
Freeland, Willard E., Hotel Duncan, New Haven, Conn.
Gaehr, A. J., 1836 Wilton Road, Cleveland, Ohio.
Gaines, Morrell W., 59 Wall St., New York, N. Y.
Gauger, Charles, 157 North 20th St., Philadelphia, Pa.
Grose, Parlee C., 464 Spitzer Bldg., Toledo, Ohio.
Hardy, Charles O., 5629 Dorchester Ave., Chicago, Ill.
Harriman, Lewis G., 140 Broadway, N. Y.
Hill, Irving, Lawrence, Kansas.
Hopkins, A. T., P. O. Box 143, New Haven, Conn.
Ijichi, S., 165 Broadway, New York, N. Y.
Ketcham, Dorothy, 4133 N. Capitol Ave., Indianapolis, Ind.
Kimber, A., 47 Broad St., New York, N. Y.
Kinney, Frank H., 3633 Zumstein Ave., Hyde Park, Cincinnati, O.
Kochersperger, E. S., 31 Orchard St., Belmont, Mass.
Langsten, L. H., 432 Gregory Ave., Weehawken, N. J.
Macauley, Fred R. N., 2442 Hilyard Ave., Berkeley, Calif.
Mario Tapparelli, 2 Passagio Carlo Alberto, Milan, Italy.
Marot, Helen, 206 West 13th St., New York, N. Y.
Mehl, Paul, Oregon Agricultural College, Corvallis, Oregon.
Mashiko, S. M., 400 Colman Bldg., Seattle, Wash.
Matteson, James S., 700 Alworth Bldg., Duluth, Minn.
Millard, C. B., 122 Fenimore St., Brooklyn, N. Y.

Morton, Alfred H., Jr., 15 Ridgefield Road, Winchester, Mass.
O'Brien, William, 120 Wood Ave., Colorado Springs, Colo.
Odatey, George T., Columbia University, New York, N. Y.
Ostoloza, B., 1723 Locust St., St. Louis, Mo.
Parry, Byron P., Federal Trade Commission, Washington, D. C.
Reeve, Frederic E., 31 Euclid Ave., Maplewood, N. J.
Rockey, Kenneth H., 31 Nassau St., New York, N. Y.
Rodkey, Robert G., Chase National Bank, New York, N. Y.
Roper, Frank A., 2400 16th St., Washington, D. C.
Sanders, T. H., University of Minnesota, Minneapolis, Minn.
Sawyer, John E., 25 Helen St., Saranac Lake, N. Y.
Schapiro, Jacob, 51 Park Row, N. Y.
Shattuck, S. F., Neenan, Wis.
Storer, John H., 30 Edgecomb Ave., New York, N. Y.
Sweet, Homer N., 50 Congress St., Boston, Mass.
Szold, Harold J., Federal Trade Commission, Washington, D. C.
Tai, Lam Sing, Customs College Library, Peking, China.
Tayler, J. B., Peking University, Peking, China.
Vose, Harold P., 120 Broadway, New York, N. Y.
Whitehead, Ralph R., Woodstock, Ulster Co., N. Y.
Wiget, Frank T., 2409 Pestalozzi St., St. Louis, Mo.
Williams, John H., 11 Everett St., Cambridge, Mass.
Yamashita, Kison Kaisha, 2-chome, Sakaemachi, Kobe, Japan.

At the twenty-fourth annual meeting of the Michigan Academy of Science Professor Frank T. Carlton, of Albion College, was elected president and Professor I. L. Sharfman, of the University of Michigan, was elected vice president in charge of the Section of Economics. The subject of the presidential address by Professor Carlton was "The human element in industry." Among the papers read before the Section of Economics was one on "Pelatiah Webster and the Revolutionary currency," by Earl V. Dye, and one on "Trading policies of trading nations during the nineteenth century," by Henry C. Adams.

At the second annual meeting of the Ohio Academy of Social Sciences, held April 18-19, 1919, papers were presented by H. G. Williams on "Taxation changes needed in educational administration"; and by Clarence D. Laylin on "Taxation problems before the joint committee on taxation, Ohio General Assembly."

A special meeting of the American Statistical Association was held in New York City on March 28 at which there was a discussion on "Some phases of war statistics."

The Taylor Society has opened a permanent office in the Engineering

Societies' Building, 29 West 39th St., in charge of Professor H. C. Person, formerly of the Tuck School of Administration and Finance at Dartmouth College.

The National Industrial Conference Board has sent a commission to Europe to study industrial economic problems. Professor J. Laurence Laughlin has accompanied the commission as director of research.

A movement is under way for organizing councils in the larger cities of the country to promote the use of acceptances. The executive committee of the American Acceptance Council, a national body, has a wide membership, with Lewis E. Pierson, of the Irving National Bank of New York, serving as president and Paul M. Warburg serving as chairman.

The Industrial Service Movement (347 Madison Ave., New York) has issued a circular on *Suggested College Course on the Human Side of Engineering*. The circular contains lists of bibliographical references on the various phases of industrial organization.

The committee on Hart Schaffner & Marx economic studies announces the following lists of subjects for the prize competition, essays being due June 1, 1920: "On what economic basis can a League of Nations be permanently established?"; "The future of the food supply"; "A study of the means and results of economic control by the Allies during the European War"; "The effects of governmental action in the United States on the competitive system"; and "A study of the effects of paper money issues during the European War." The circular also gives two pages of other available subjects. Inquiry may be directed to J. Laurence Laughlin, University of Chicago, Chicago, Illinois.

The War College Division of the War Department announces the publication of an official history of the war with Germany. As outlined, the history will comprise eighteen volumes of approximately 250,000 words each, presenting a descriptive and pictorial history of the military, diplomatic, and economic activities of the United States during the war. Four volumes will cover the economic organization. The treatment will be narrative. The first volume of this division will describe the early emergency measures which were taken in attempts at financial, industrial, and military mobilization; the second will deal with the formation of the basic policies; the third, with the development of measures of conservation; and the fourth, with the final workings of the program of procurement. The section dealing with

economic studies has already published a brief monograph giving a synopsis of the economic processes of the war and is planning the publication of a handbook of all economic agencies that were concerned in the war organization.

Volume XIII of the *Papers and Proceedings of the American Sociological Society* includes papers and discussions presented at its meeting held in Richmond last December.

In the *Educational Review* for February, 1919, Professor Charles A. Ellwood has an article on "Reconstruction of education upon a social basis." He recommends that more attention be given to social studies in the curricula of schools and colleges.

Harvard University Press will shortly publish a volume on *The Italian Emigration of our Times*, by Professor Robert F. Foerster, of Harvard University.

Professor Louis Levine, of the department of economics at the University of Montana, has been suspended from service in that institution on account of the publication of a report on mine taxation in Montana. This has resulted in much criticism of the action of the authorities of that institution, and the Association of University Professors has appointed a committee of investigation.

Professor Fred R. Fairchild, of Yale University, has resigned as secretary of the National Tax Association and editor of its *Bulletin*. Mr. A. N. Holcomb, president of the association, will temporarily undertake the editorship of the *Bulletin*.

The Princeton Economics Seminary has just completed a cumulative bibliography of the articles listed in the AMERICAN ECONOMIC REVIEW from the date of the first issue and will keep this bibliography up to date.

Professor Ralph E. Heilman, due to the pressure of other work, has been obliged to give up the work of preparing abstracts of periodical articles on the subject of public utilities in this REVIEW. Mr. Charles S. Morgan, associate economist in the Bureau of Standards of the Department of Commerce, has kindly accepted this responsibility.

Dr. Lewis H. Haney has resigned from the economics staff of the Federal Trade Commission, with which he has been connected for the last three years, and will act as economic advisor to the Southern Wholesale Grocers' Association, with headquarters at Jacksonville, Florida. He will organize and be the first head of the association's

new bureau of research and publicity. This bureau proposes, through expert assistance, to establish the facts with respect to economic conditions and tendencies in the distribution of food products in the United States which are or may be contrary to public welfare.

The Library of Congress is about to issue a *Select List of References on Economic Reconstruction,* including reports of the British Ministry of Reconstruction, compiled under the direction of H. H. B. Meyer, chief bibliographer. This will contain 175 entries.

Miss Laura A. Thompson, librarian of the Department of Labor at Washington has prepared a *Supplementary List of References on Reconstruction* (typewritten, pp. 42).

The Russian Information Bureau in the United States (Woolworth Bldg., New York City) is issuing a magazine entitled *Struggling Russia,* opposed to Bolshevism.

The *American Labor Legislation Review* for March, 1919, is devoted to the subject of labor and reconstruction. It includes the addresses presented at the last annual meeting, held in Richmond.

In the January issue of *The Alumni Quarterly* of the University of South Dakota is an article on "The evolution of economics at the University of South Dakota," by Professor Frank T. Stockton. The article traces the development of the teaching of economics in that institution and gives some account of the careers and publications of the men who have had charge of the department.

The *Intercollegiate Socialist* for April-May, 1919, notes that the quarterly will be developed into a more comprehensive monthly, to be known as the *Socialist Review.* This will be primarily "a magazine of accurate information and vital discussion rather than a journal of opinion."

Announcement is made of the publication of a new weekly journal entitled *The Review,* to be edited by Fabian Franklin and Harold de Wolf Fuller (140 Nassau St., New York).

A new monthly journal, the *Trade Acceptance Journal,* was established in 1918 by the National Trade Acceptance Bureau, Inc., to promote the use of trade acceptances (Tribune Bldg., New York City, price $3 a year).

The American International Corporation has begun the publication of a house *Bulletin* in which there is considerable information in regard to foreign trade (120 Broadway, New York City).

The Social Service Council of Canada has begun the publication of a monthly journal entitled *Social Welfare* (Toronto, Confederation Life Bldg.).

Since the preparation of the lists of new books the following have been received:

Paul F. Brissenden, *The I. W. W.: A Study of American Syndicalism* (New York: Longmans, Green & Co.).

Thomas N. Carver, *War Thrift* (New York: Oxford University Press).

Barry Cerf, *Alsace-Lorraine since 1870* (New York: Macmillan).

Frederick A. Cleveland and Joseph Schafer, *Democracy in Reconstruction* (Boston: Houghton, Mifflin).

C. E. Grunsky, *Public Utility Rate Fixing* (San Francisco: Technical Publishing Co.).

Louis Levine, *The Taxation of Mines in Montana* (New York: B. W. Huebsch).

Slavko Secerov, *Economic Phenomena Before and After War. A Statistical Theory of Modern Wars* (London: George Routledge & Sons, Ltd.).

Lionel Smith-Gordon and Laurence C. Staples, *Rural Reconstruction in Ireland* (New Haven: Yale University Press).

J. Russell Smith, *Influence of the Great War upon Shipping* (New York: Oxford University Press).

John Spargo, *Bolshevism* (New York: Harper & Bros.).

William G. Sumner, *The Forgotten Man, and Other Essays* (New Haven: Yale University Press).

A. G. Thomas, *Principles of Government Purchasing* (New York: Appleton & Co.).

A. Hyatt Verrill, *South and Central American Trade Conditions of Today* (New York: Dodd, Mead & Co.).

Appointments and Resignations

Dr. Edith Abbott has taken leave of absence both from the University of Chicago and from the School of Civics and Philanthropy, for the spring quarter, to do special research work in England for the Carnegie Endowment.

Mr. O. C. Ault, formerly professor of economics in the University of Florida and who has recently held a fellowship at the University of Wisconsin, will succeed Dr. L. C. Gray as professor of rural economics in George Peabody College for Teachers.

Dr. John Bauer has resigned his position as assistant professor in the department of economics at Princeton University.

Mr. Joshua Bernhardt, fellow in political economy in the Johns Hopkins University, is continuing his work as chief statistician of the Sugar Division of the Food Administraton.

Dr. Francis H. Bird, recently connected with the Industrial Service Section of the United States Ordnance Department and with the National War Labor Board, is giving the course in labor problems at Dartmouth College during the present quarter.

Professor John E. Brindley, of Iowa State College, has been appointed tax expert for the recently authorized Code Commission of Iowa. The duties of this commission are to arrange the tax sections of the code in logical order, cut out duplications and redraft sections, and to suggest necessary and desirable amendments to the present tax law.

Professor Frank H. Dixon, head of the department of economics at Dartmouth College, will leave next term to become professor of transportation at Princeton University.

Mr. George Eberle is absent from the University of Wisconsin being engaged in public utilities investigation work in Manitoba, Canada.

Mr. Wilfred Eldred, of Leland Stanford Junior University was employed by the Milling Division of the Food Administration after his discharge from the field artillery.

Mr. Lester R. Ford has been appointed instructor in life insurance at the Graduate School of Business of Harvard University for the year 1919-1920.

Dr. F. G. Franklin, who for nine years has been in Albany College, has been made head of the department of social science in Willamette University.

Professor F. B. Garver has returned to Leland Stanford Jr. University after serving in the Bureau of Planning and Statistics of the Shipping Board.

Dr. William F. Gephart has been elected vice president of the Third National Bank of St. Louis. He will retain his connection with Washington University for a year as acting dean of the School of Commerce and Finance.

Dr. L. C. Gray has resigned his position at the George Peabody

College for Teachers to accept a position as head of the Division of Land Tenure and Land Problems in the newly organized Office of Farm Management of the Department of Agriculture.

Professor J. Anton de Hass has been granted leave of absence from the University of Washington and has accepted the position of professor of foreign trade at the Commercial University of Rotterdam, Holland.

Professor Ralph H. Hess has been made Lieutenant Colonel in charge of administration records of the American Expeditionary Force in France. He will return to the University of Wisconsin in September, 1919.

Professor Jacob H. Hollander, of The Johns Hopkins University, delivered the Weil Lectures in American Citizenship at the University of North Carolina, May 5-7, upon the general subject "American citizenship and economic welfare."

Mr. J. B. Hubbard, special expert for the United States Tariff Commission, has been appointed for next year instructor in economics at Princeton University.

Mr. Harry Jerome, instructor in economics at the University of Wisconsin, has been granted leave of absence to accept a position as income tax assessor for Dane County, Wisconsin.

Professor Eliot Jones, who has been with the Central Bureau of Planning and Statistics, has returned to Leland Stanford Jr. University.

Assistant Professor O. W. Knauth has resigned from the department of economics at Princeton University.

Professor Don D. Lescohier is conducting local courses on Americanization in several cities of Wisconsin and will give a lecture course during the summer session at the University of Wisconsin, June 30 to August 8.

Lieut. J. G. McKay has returned to the University of Wisconsin as instructor in economics.

Mr. Paul Miller, of Michigan Agricultural College, has accepted an instructorship in the department of economics of the University of Minnesota.

Dr. Broadus Mitchell, formerly special staff writer of *The News Leader,* Richmond, Va., has been appointed instructor in political economy in The Johns Hopkins University.

Dr. F. W. Ogburn, head of the department of sociology at the University of Washington, Seattle, has resigned to accept a professorship in sociology at Columbia University.

Dr. Jesse S. Robinson, who has been directing educational work in cantonments under the Y. M. C. A., has been appointed to the chair of political economy and business administration at Simpson College, Indianola, Iowa.

Dr. Sumner Schlichter has been appointed an instructor in economics at Princeton University.

Professor Horace Secrist has returned to Northwestern University and has been promoted to a full professorship in economics and statistics.

Dr. Robert J. Sprague will return to the Massachusetts Agricultural College in September, 1919. He is now giving courses on government, the political and social aspects, under the army overseas education program.

Dr. N. I. Stone has accepted a position with the Hickey-Freeman Company, Rochester, N. Y., as employment manager.

Mr. Arthur E. Swanson has resigned his position as dean of the School of Commerce at Northwestern University and has taken a position with the Firestone Tire and Rubber Company of Akron, Ohio, where his duties will be mainly in the work of organization.

Dr. Frank W. Taussig, of Harvard University, chairman of the United States Tariff Commission, was in March directed by President Wilson to proceed to Paris for the purpose of taking part in the readjustment of commercial treaties and similar problems.

Dr. H. C. Taylor, has resigned from the University of Wisconsin and has been appointed chief of the Office of Farm Management, United States Department of Agriculture, succeeding Dr. W. J. Spillman, who has become editor of the *Pennsylvania Farmer*.

Dr. Harry R. Tosdal has been promoted to full professorship and head of the department of economics and finance at the College of Business Administration of Boston University to succeed Professor Ralph B. Wilson.

Commissioner H. R. Trumbower, of the Wisconsin Railway Commission, is giving the course in public utilities at the University of Wisconsin in the absence of Mr. George Eberle.

Mr. W. L. Wanlass, who has been doing incidental teaching at The Johns Hopkins University, has been appointed to the chair of political economy in Union College, Schenectady, New York.

Professor Myron W. Watkins, of the University of Texas, will this summer hold a position with the Southwest National Bank of Commerce of Kansas City.

Professor M. S. Wildman has returned to Leland Stanford Jr. University after service with the Bureau of Planning and Statistics and later with the Price Section of the War Industries Board.

Professor Ralph B. Wilson has resigned his position at Boston University to enter the service of the Babson Statistical Organization.

Dr. Leo Wolman, of The Johns Hopkins University, is serving as one of the statistical experts assisting the American delegates to the Peace Conference.

Lieut. Elmer Wood has been appointed to teach accounting and corporation finance during the spring and summer terms at the University of Missouri.

Professor Isaac A. Loos, died March 24, 1919. For thirty years Professor Loos was head of the department of political economy and sociology in the State University of Iowa. He was author of *Studies in the Politics of Aristotle and Plato* and a contributor to the journals of sociology, political science, and economics.

Sir Robert Harry Inglis Palgrave died January 25, 1919, at the advanced age of ninety-two. Among his contributions in the field of economics was a study published in 1903 on *Bank Rate and Money Market in England, France, Germany, Holland, and Belgium,* also the *Dictionary of Political Economy,* the final volume of which was published in 1908.

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